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The Right to Silence Helps the Innocent: A Game-Theoretic Analysis of the Fifth Amendment Privilege

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ARTICLE

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Daniel J. Seidmann and Alex Stein

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THE RIGHT TO SILENCE HELPS THE INNOCENT: A GAME-THEORETIC ANALYSIS OF THE FIFTH AMENDMENT PRIVILEGE*

Daniel J. Seidmann** and Alex Stein***

This Article develops a consequentialist game-theoretic perspective for understanding the right to silence. Professors Seidmann and Stein reveal that the conventional perception of the right to silence — that it impedes the search for truth and thus helps only criminals — is mistaken. Professors Seidmann and Stein demonstrate that the right to silence can help triers of fact to distinguish between innocent and guilty suspects and defendants. They argue that a guilty suspect's self-interested response to questioning can impose externalities, in the form of wrongful conviction, on innocent suspects and defendants who tell the truth but cannot corroborate their responses. Absent the right to silence, guilty suspects and defendants would make false exculpatory statements if they believed that their lies were unlikely to be exposed. Aware of these incentives, triers of fact would rationally discount the probative value of uncorroborated exculpatory statements at the expense of innocent defendants who could not corroborate their true exculpatory statements. Because the right to silence is available, innocent defendants still tell the truth while guilty defendants may rationally exercise the right. Thus, guilty defendants do not pool with innocent defendants by lying, and as a result, triers of fact do not wrongfully convict innocent defendants. Professors Seidmann and Stein contend that the existing empirical data support their game-theoretic analysis. Furthermore,

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they argue that this anti-pooling rationale for the right to silence justifies and coherently explains Fifth Amendment jurisprudence.

"[A]t one exquisitely ironic point in the narrative he is unable to publish a true story about a Russian agent operating in the capital because a false story to the same effect has already been circulated and then denied."¹

I. INTRODUCTION

The right to silence is under attack. In *Dickerson v. United States*,² the Supreme Court declared unconstitutional 18 U.S.C. § 3501,³ an attempt by Congress to repeal the exclusionary rule set forth in *Miranda v. Arizona*.⁴ Specifically, the Court upheld the principle that a violation of any of *Miranda's* warning requirements gives rise to an irrebuttable presumption of involuntariness, thereby rendering inadmissible any confession subsequently made by a defendant.⁵ The Court relied entirely on *stare decisis* grounds, without considering the right to silence on its merits. As stated by Chief Justice Rehnquist, who delivered the 7-2 majority opinion of the Court, "[w]hether or not we would agree with *Miranda's* reasoning and its resulting rule, were we addressing the issue in the first instance, the principles of *stare decisis* weigh heavily against overruling it now."⁶

Hence, although *Miranda* survived, it did not do so on its merits, and the fate of other doctrinal components of the right to silence remains unclear. Many people argue that the criminal justice system would do better without the right to silence. These opponents of the right maintain that its abolition would impel more suspects to speak to the police and would lead more criminals to confess to the crimes they commit.⁷

¹ David Lodge, *Waugh's Comic Waste Land*, N.Y. REV. BOOKS, July 15, 1999, at 29, 32 (book review).

² 120 S. Ct. 2326 (2000).

³ 18 U.S.C. § 3501 (1994).

⁴ 384 U.S. 436 (1966).

⁵ *Dickerson*, 120 S. Ct. at 2329-30.

⁶ *Id.* at 2336.

⁷ See, e.g., Paul G. Cassell, *The Statute That Time Forgot: 18 U.S.C. § 3501 and the Overhauling of Miranda*, 85 IOWA L. REV. 175 (1999) (arguing that determining confessions' voluntariness on a case-by-case basis, as prescribed by 18 U.S.C. § 3501, is both constitutional and socially desirable as a vehicle for obtaining a greater number of voluntary confessions). Another commentator writes:

Prosecutors believe that voluntary confessions are an essential tool for society, and frequently [are] the evidence that ensures the conviction of dangerous criminals. Many crimes are committed without eyewitnesses, or against victims such as children who cannot testify. Where eyewitnesses are available, they are subject to increasing challenges by the defense bar. There may be little or no physical evidence in many cases, and often physical evidence is located because of voluntary statements by suspects. To the extent

The key question is whether this abolitionist proposal is good or bad. Critical examination of this question goes to the very roots of the right to silence. *Miranda* is undeniably an important manifestation of that constitutional right, but it is still an offshoot of a rather large tree: the right to silence manifests itself in numerous ways, and these manifestations all warrant consideration in formulating a sound policy decision. Why not return to Jeremy Bentham's suggestion and consider a wholesale abolitionist program that would eliminate the right to silence along with other allegedly irrational barriers to conviction?⁸

We must consequently rephrase the question as follows: Why not change all the relevant rules to encourage more suspects to make voluntary statements during police interrogations and more defendants to testify in court, instead of remaining silent? Specifically, why not allow factfinders to draw adverse inferences against silent suspects and nontestifying defendants?

This question, which lies at the heart of Anglo-American criminal justice systems, is the focus of the present Article. This Article challenges the traditional perception of the right-to-silence doctrine by linking it to the fundamental requirement that the prosecution prove its case beyond all reasonable doubt. This Article employs a game-theoretic analysis to combine these two doctrines, and by so doing, it proposes a new understanding of the right to silence.

This Article argues that the right to silence helps to distinguish the guilty from the innocent by inducing an anti-pooling effect that enhances the credibility of innocent suspects. This effect occurs because the right to silence affords a guilty suspect an attractive alternative to imitating an innocent suspect through lies — an important feature that the academic literature has largely ignored or underestimated. Such lies obscure the differences between the guilty and the innocent and, consequently, reduce the trustworthiness of accounts given by innocent suspects. Equipped with the right to silence, many guilty suspects opt for silence instead of lies. Guilty suspects fear that the police or the prosecution will discover the truth and use their lies against them as evidence of guilt. If the right to silence were unavailable, these suspects would have a greater incentive to lie. The right to silence thus operates as an anti-pooling device that motivates guilty suspects to

that *Miranda* excludes otherwise voluntary statements, and evidence which is obtained because of those statements, it exacts a cost on society.

Stephen J. Johnson, *Miranda Should Be Reconsidered*, IND. LAW., Dec. 22, 1999, at 4.

⁸ See 5 JEREMY BENTHAM, *RATIONALE OF JUDICIAL EVIDENCE* 1-8 (Fred B. Rothman & Co. 1995) (1827) (arguing against exclusionary rules and favoring admission of all relevant evidence, subject to limitations relating to undue expense, delay, and vexation). For comprehensive analyses of Bentham's evidence theory, see WILLIAM TWINING, *THEORIES OF EVIDENCE: BENTHAM AND WIGMORE* 19-108 (1985); and Andrew D.E. Lewis, *The Background to Bentham on Evidence*, 2 UTILITAS 195 (1990).

separate from innocent ones. Alternatively, inducing guilty suspects to confess would also lead to the desired separation; however, incentives for confessing, such as reduction in punishment, generally incur greater social costs than do incentives for silence.

This new understanding becomes possible due to the game-theoretic methodology employed by this Article. The traditional perception that the right-to-silence doctrine strikes a balance between civil-libertarian values⁹ and utilitarian goals¹⁰ relies on a conspicuously nonfactualist analysis.¹¹ On its normative side, this analysis is confined to the domain of moral and political philosophy. From this angle, the desirability of the right to silence depends on the moral balance between the competing utilitarian goals and civil-libertarian values.¹² On its positive side, this analysis follows the traditional interpretivist strategy. As such, it derives solutions to specific legal problems that arise in the application of the right to silence from the right's accepted rationales.¹³ At both levels, the analysis operates under pos-

⁹ Broadly speaking, civil libertarians seek to protect the accused from maltreatment by law enforcement agencies.

¹⁰ In general, the utilitarian perspective considers the efficiency of the criminal justice machinery in protecting society from crime.

¹¹ *But see* Eric Rasmusen, *Mezzanatto and the Economics of Self-Incrimination*, 19 CARDOZO L. REV. 1541 (1998) (exhibiting a remarkable exception to this observation by analyzing an important aspect of the self-incrimination privilege through game-theory lenses).

¹² *See generally* Albert W. Alschuler, *A Peculiar Privilege in Historical Perspective: The Right to Remain Silent*, 94 MICH. L. REV. 2625 (1996); Vincent Martin Bonventre, *An Alternative to the Constitutional Privilege Against Self-Incrimination*, 49 BROOK. L. REV. 31 (1982); Ian H. Dennis, *Instrumental Protection, Human Right or Functional Necessity? Reassessing the Privilege Against Self-Incrimination*, 54 CAMBRIDGE L.J. 342 (1995); David Dolinko, *Is There a Rationale for the Privilege Against Self-Incrimination?*, 33 UCLA L. REV. 1063 (1986); Donald A. Dripps, *Self-Incrimination and Self-Preservation: A Skeptical View*, 1991 U. ILL. L. REV. 329; D.J. Galligan, *The Right to Silence Reconsidered*, 41 CURRENT LEGAL PROBS. 69 (1988); Robert S. Gerstein, *Privacy and Self-Incrimination*, 80 ETHICS 87 (1970); R. Kent Greenawalt, *Silence as a Moral and Constitutional Right*, 23 WM. & MARY L. REV. 15 (1981); Edwin Meese III, *Promoting Truth in the Courtroom*, 40 VAND. L. REV. 271, 275-79 (1987); Stephen J. Schulhofer, *Some Kind Words for the Privilege Against Self-Incrimination*, 26 VAL. U. L. REV. 311 (1991); Richard K. Sherwin, *Dialects and Dominance: A Study of Rhetorical Fields in the Law of Confessions*, 136 U. PA. L. REV. 729 (1988); William J. Stuntz, *Lawyers, Deception, and Evidence Gathering*, 79 VA. L. REV. 1903 (1993); William J. Stuntz, *Self-Incrimination and Excuse*, 88 COLUM. L. REV. 1227 (1988) [hereinafter Stuntz, *Self-Incrimination*]; John H. Wigmore, *Nemo Tenetur Seipsum Prodere*, 5 HARV. L. REV. 71 (1891). For a discussion of the privilege's history, see LEONARD W. LEVY, *ORIGINS OF THE FIFTH AMENDMENT: THE RIGHT AGAINST SELF-INCRIMINATION* (1968). For expositions of the many policy foundations of the privilege, see ERWIN N. GRISWOLD, *THE 5TH AMENDMENT TODAY* (1955); and 1 MCCORMICK ON EVIDENCE §§ 114-118, at 421-35 (John William Strong ed., 4th ed. 1992) [hereinafter MCCORMICK].

¹³ *See generally* OFFICE OF LEGAL POLICY, U.S. DEP'T OF JUSTICE, *REPORT TO THE ATTORNEY GENERAL ON ADVERSE INFERENCE FROM SILENCE* (1989), reprinted in 22 J.L. REFORM 1006 (1989) [hereinafter ADVERSE INFERENCE]; Akhil Reed Amar & Renée B. Lettow, *Fifth Amendment First Principles: The Self-Incrimination Clause*, 93 MICH. L. REV. 857 (1995); Donald B. Ayer, *The Fifth Amendment and the Inference of Guilt from Silence: Griffin v. California After Fifteen Years*, 78 MICH. L. REV. 841 (1980); Robert S. Gerstein, *The Demise of Boyd: Self-*

tulated factual assumptions. Specifically, it assumes that the right promotes civil-libertarian values by protecting guilty suspects from being compelled to assist in their own convictions and that the right does not benefit innocent suspects and defendants. This confinement of the inquiry is, indeed, necessary because of the inherently postulational standpoint of both the moral and the interpretivist investigations. Each of these investigations can operate only under given factual assumptions. Moral investigation is possible only when the facts that determine the relevant strengths and weaknesses lie ready on the scales. The same holds true, in the case of interpretive investigation, with regard to the relationship between the relevant legal doctrines and their underlying justifications, generalized by Ronald Dworkin as "preinterpretive" data.¹⁴

In the case of the right to silence, this confinement also has an intuitive appeal. Factual assumptions traditionally ascribed to this right correspond to the intuitions of many legal specialists. According to the conventional wisdom, the right to silence helps only the guilty. Consequently, many perceive the right to embody the overriding capacity of its underlying civil-libertarian values, such as privacy (the right to be let alone),¹⁵ individualism (the right not to facilitate the case of one's adversary, especially when the latter happens to be the state),¹⁶ and

Incrimination and Private Papers in the Burger Court, 27 UCLA L. REV. 343 (1979); Jane E. Notz, *Prearrest Silence as Evidence of Guilt: What You Don't Say Shouldn't Be Used Against You*, 64 U. CHI. L. REV. 1009 (1997); Stephen A. Saltzburg, *The Required Records Doctrine: Its Lessons for the Privilege Against Self-Incrimination*, 53 U. CHI. L. REV. 6 (1986); Henry T. Terry, *Constitutional Provisions Against Forcing Self-Incrimination*, 15 YALE L.J. 127 (1905).

¹⁴ RONALD DWORIN, *LAW'S EMPIRE* 90-91 (1986).

¹⁵ See Bonventre, *supra* note 12, at 56-59 (treating the privacy rationale as a plausible justification for the right to silence); Galligan, *supra* note 12, at 88-89 (same); Gerstein, *supra* note 13, at 349-50 (same); Gerstein, *supra* note 12 (same); Erwin N. Griswold, *The Right to be Let Alone*, 55 NW. U. L. REV. 216 (1961) (same). *But see* Amar & Lettow, *supra* note 13, at 890-91 (arguing that, if the privacy rationale were sound, the privilege would require equal application in civil proceedings); Dolinko, *supra* note 12, at 1107-37 (rejecting the privacy rationale); Schulhofer, *supra* note 12, at 317, 319-20 (casting doubts on the privacy rationale); Stuntz, *Self-Incrimination*, *supra* note 12, at 1234 ("If the privilege were sensibly designed to protect privacy . . . , its application would turn on the *nature* of the disclosure the government wished to require, and yet settled fifth amendment law focuses on the criminal consequences of disclosure.")

¹⁶ See 8 JOHN HENRY WIGMORE, *EVIDENCE IN TRIALS AT COMMON LAW* § 2251, at 295-318 (John T. McNaughton ed., rev. ed. 1961) (treating the individualism rationale as plausible on moral and historical grounds); Gerstein, *supra* note 13, at 349-52 (same); Griswold, *supra* note 15, at 222-23 (same); John H. Langbein, *The Historical Origins of the Privilege Against Self-Incrimination at Common Law*, 92 MICH. L. REV. 1047, 1066-71 (1994) (same); Notz, *supra* note 13, at 1019, 1033-34 (same); *see also* Michael S. Green, *The Privilege's Last Stand: The Privilege Against Self-Incrimination and the Right to Rebel Against the State*, 65 BROOK. L. REV. 627 (1999) (justifying the right to silence as an individual's entitlement to rebel against the state). *But see* Alschuler, *supra* note 12, at 2635-38 (criticizing the individualism rationale); Bonventre, *supra* note 12, at 49-51 (same); Donald A. Dripps, *Foreword: Against Police Interrogation — And the Privilege Against Self-Incrimination*, 78 J. CRIM. L. & CRIMINOLOGY 699, 717 (1988) (rejecting the individualism rationale). The individualism rationale also surfaced in an important decision of the European

free agency (the right not to be punished for resistance to questioning out of fear of self-incrimination or perjury, which reduces the one's freedom).¹⁷ Thus, legal academics and practitioners commonly conclude that the right to silence trumps utility by subordinating the interests of society to those of the criminal. Indeed, they argue that only guilty offenders exercise this right: as observed long ago by Bentham, an innocent suspect or defendant almost always prefers to speak out in order to "dissipate the cloud which surrounds his conduct, and give every explanation which may set it in its true light."¹⁸ This preference is the "highest interest, and . . . most ardent wish"¹⁹ of virtually any innocent suspect or defendant.

However intuitive they may appear, these factual assumptions are too important to leave unscrutinized. Indeed, these assumptions are crucial to the fate of the arguments favoring the abolition of the right to silence and, alternatively, to its retention. If such arguments rest on assumptions that are factually inaccurate, then they must be either discarded or modified.

A factual examination of these assumptions may follow two principal routes. One of these routes is empirical. By gathering and analyzing relevant empirical data, one can evaluate the workings of the right to silence without relying on sheer intuition. Such an approach might determine, statistically or by any other epistemologically plausible standard, whether the right aids only the guilty. The alternative route, which this Article follows, is behavioral modeling. Such modeling is usually, but not exclusively, based on rational-choice theory. Because reliable empirical evidence is often unavailable, the empirical approach is often problematic, as is the case with the factual assumptions examined by this Article. For example, it is extremely difficult, if not altogether impossible, to estimate the effect of the right to silence on the rate of true and false confessions. A suspect may confess to a crime for a variety of reasons. He may confess to a crime truthfully on finding the incriminating evidence irresistible. Alternatively, he may make a false or a truthful confession under the pressure of police questioning.

Court of Human Rights. See *Saunders v. United Kingdom*, 23 Eur. H.R. Rep. 313 (1997) (invoking this rationale). For an analysis of the impact of the privilege against self-incrimination on the domestic laws of the European Union member states, see IAN H. DENNIS, *THE LAW OF EVIDENCE* 151-56 (1999).

¹⁷ The free agency rationale is firmly rooted in Supreme Court jurisprudence. See *Doe v. United States*, 487 U.S. 201, 212-13 (1988); *Schmerber v. California*, 384 U.S. 757, 760-65 (1966). But see Amar & Lettow, *supra* note 13, at 890 (claiming that the rationale is unsound); Bonventre, *supra* note 12, at 53-56 (same); Dripps, *supra* note 16, at 712-15 (same); Schulhofer, *supra* note 12, at 316-19 (same).

¹⁸ JEREMY BENTHAM, *A TREATISE ON JUDICIAL EVIDENCE* 241 (M. Dumont ed., Fred B. Rothman & Co. 1981) (1825).

¹⁹ *Id.*

He may also make a false confession to exonerate the actual guilty party (for example, out of fear or love). A suspect deciding to remain silent during his interrogation may do so regardless of the right to silence: silence would be the best strategy for many guilty suspects even in the absence of a right.²⁰

An even greater problem inherent in the empirical approach lies in its limited ability to produce determinate predictions when applied to human actions and decisions. There is no good reason to believe that uniformly observed actions and decisions will continue in the future. Reliance on statistical generalizations in forecasting human actions may prove perilous: recall Bertrand Russell's (in)famous chicken, conditioned to expect its daily feeding until the day the farmer interrupted this routine by butchering it for meat.²¹ One can make predictions about human actions only within some theoretical framework that imposes order on the empirically gathered facts. Generalizations about human actions acquire plausibility only by virtue of some explanatory theory that connects actions to reasons.²² Theoretical lenses may be microscopic or macroscopic, depending on the desired level of abstraction. In a search for a causal mechanism that explains numerous actions by their underlying motivations, theoretical lenses must be at a relatively high level of abstraction. This form of reductionism is necessary to tame "wild facts" and is, therefore, intrinsic to behavioral modeling. The compromised accuracy resulting from this reductionism is the price that any behavioral theory (and, perhaps, any theory) exacts in order to attain determinacy.

The chosen theory must not only replace indeterminacy with determinacy, but also generate predictions that are reasonably accurate.²³ The theory cannot disregard recalcitrant facts not squarely aligned with it for the sake of attaining theoretical determinacy. In order to accommodate these outliers, behavioral models must remain open to adjustment and fine-tuning.²⁴ This form of reflective equilibrium, which adjusts to accommodate relevant models, facts, and intuitions,

²⁰ Unlike true and false confessions, however, the confession rate itself is always a hard fact. Therefore, one can attribute changes in the confession rate to the relevant enhancement (or weakening) of the right to silence. Empirical research in this area would be more promising because the relevant statistical inferences would be independent of the motives held by confessing and non-confessing suspects (for which only soft data are available).

²¹ BERTRAND RUSSELL, *THE PROBLEMS OF PHILOSOPHY* 63 (Oxford Univ. Press 1997) (1912).

²² See generally KARL R. POPPER, *CONJECTURES AND REFUTATIONS: THE GROWTH OF SCIENTIFIC KNOWLEDGE* 33-59, 215-22 (5th ed. 1989).

²³ E.g., JON ELSTER, *SOLOMONIC JUDGEMENTS: STUDIES IN THE LIMITATIONS OF RATIONALITY* 1-3 (1989).

²⁴ See, e.g., *id.* at 3; see also Christine Jolls, Cass R. Sunstein & Richard Thaler, *A Behavioral Approach to Law and Economics*, 50 *STAN. L. REV.* 1471, 1484-85 (1998); Richard A. Posner, *Rational Choice, Behavioral Economics, and the Law*, 50 *STAN. L. REV.* 1551, 1560-61 (1998).

can produce a defensible behavioral theory. The strength of a theory depends on its determinacy, predictive capacity, and inner coherence.²⁵

A theory's strength is also contingent on the strength of competing theories. Indeed, a theory becomes stronger by virtue of being more determinate, more predictive, and more coherent than its competitors. Moreover, a coherent theory that is reasonably determinate and predictive may gain strength by virtue of being the only theory available. To quote a famous Chicago School saying: "[I]t takes a theory to beat a theory."²⁶

This Article advances a game-theoretic model that addresses considerations of determinacy, accuracy, and coherence and that offers a tool for understanding the implications of the right to silence. As previously indicated, a desire to broaden the understanding of the right to silence, which the right's traditional perception unduly restricts, motivated the construction of this model. The nonfactualist moral interpretivism that drives the traditional perception ignores important strategic interactions to which the right to silence gives rise and that, presumably, occur "in the shadow of the law."²⁷ More specifically, the conventional wisdom fails to capture the dynamic aspect of the right to silence, namely, its impact on strategic interactions (games) that occur between different suspects or defendants, on the one hand, and between each individual suspect or defendant and the administrators of the criminal justice system (police, prosecution, and courts), on the other hand. This failure is fatal. Thus, there is a substantial discrepancy between the paradigmatic outcome of the relevant interactions and the traditional wisdom. Not only does our game-theoretic model confirm this conclusion, but some empirical findings, which we discuss below, support it as well.

This Article proceeds in the following order. Part II explains the game-theoretic methodology followed throughout the Article. It uses this methodology to juxtapose the traditional intuitions about the right to silence, combined with the criminal standard of proof, with a number of popular truths that most criminal law practitioners would confirm.

Part III refutes the argument, first made by Bentham, that the right to silence helps only the guilty. This Part then provides a game-theoretic analysis of paradigmatic interrogation settings. Our analysis reveals that by making silence advantageous to guilty suspects, the

²⁵ See POPPER, *supra* note 22, at 59-65.

²⁶ Richard A. Epstein, *Common Law, Labor Law, and Reality: A Rejoinder to Professors Getman and Kohler*, 92 YALE L.J. 1435, 1435 (1983).

²⁷ Robert H. Mnookin & Lewis Kornhauser, *Bargaining in the Shadow of the Law: The Case of Divorce*, 88 YALE L.J. 950, 997 (1979). This phrase highlights the reality that incentives provided by the relevant legal doctrine influence many strategic interactions. *Id.*

right to silence helps the innocent as well as the guilty: without this right, the guilty would lack an inducement to separate themselves from the innocent; the unfortunate result would be a pooling of all suspects, which would decrease the credibility of the exonerating accounts of innocent suspects and defendants. This insight yields a new rationale for the right to silence that is more satisfactory than the rationales offered by the existing caselaw and literature.

Part IV discusses the doctrinal aspects of the right to silence. This Part demonstrates that our rationale for the right-to-silence doctrine justifies the doctrine's scope more effectively than its competitors do. In particular, our new rationale provides a compelling justification why the right applies to "testimonial," as opposed to "physical," evidence; to criminal, as opposed to civil and disciplinary, proceedings; and to custodial, as opposed to noncustodial, interrogations. Moreover, our rationale justifies the same-sovereign limitation, which the Supreme Court recently affixed to the right in *United States v. Balsys*.²⁸ An analysis of the relevant caselaw follows this discussion.²⁹ The game-theoretic analysis, which we develop in Part III, begins with the right to silence during interrogation, concentrating on *Doyle v. Ohio*.³⁰ From the same angle, we discuss in Part IV the right to silence at trial, focusing first on *Griffin v. California*,³¹ the right's primary manifestation, and second on the Supreme Court's recent decision in *Mitchell v. United States*,³² which extended the application of the right to sentencing proceedings.³³ This discussion also highlights the important connection between the applications of the right to silence at the pretrial and trial stages.

Part V tests our model against the existing empirical data. It demonstrates that our model is sound not only normatively, in that it is derived from a rational-choice analysis, and doctrinally, in that it is consistent with the positive law, but also empirically, in that the choices made by actual suspects and defendants largely correspond to our model's predictions.

²⁸ 524 U.S. 666 (1998) (holding that concerns about foreign prosecution cannot activate the Fifth Amendment privilege).

²⁹ For the sake of brevity, we will focus primarily on Fifth Amendment jurisprudence and only occasionally refer to non-American jurisdictions.

³⁰ 426 U.S. 610 (1976) (holding that, in general, a jury may not draw adverse inferences from the fact that a defendant stood mute or claimed his Fifth Amendment privilege during custodial interrogation); see also *Miranda v. Arizona*, 384 U.S. 436 (1966) (setting forth the principles of the right to silence doctrine under the Fifth Amendment, including the ban on adverse inferences from a defendant's silence).

³¹ 380 U.S. 609 (1965) (holding that a jury generally may not draw adverse inferences from a defendant's failure to testify in his defense).

³² 525 U.S. 314 (1999).

³³ *Id.* at 321, 330.

Part VI summarizes our principal conclusions and is followed by an Appendix, in which we present a formal analysis of the issues. This analysis is not strictly necessary to understand our thesis, but may benefit mathematically inclined readers.

Some preliminary groundwork must precede our discussion of these issues. The right to silence branches into two doctrines, one of which belongs to the law of contempt and the other to the law of evidence. Under the law of contempt, a person who refuses to communicate with an authorized tribunal or agency, such as a court or the police, is exempt from the ordinarily applicable punishment in certain circumstances. This offshoot of the right-to-silence doctrine is the "contempt exemption." The contempt exemption applies if the agency or tribunal seeks to elicit communication that might contribute to the person's conviction of a criminal offense. Under evidence law, neither a person's invocation of the contempt exemption nor a person's refusal to communicate with an authorized tribunal or agency can be used as evidence against that person at her criminal trial. Consequently, the factfinder may not draw any adverse inferences from the accused's decision not to testify in her defense.³⁴ The factfinder also may not infer guilt from the fact that the accused declined to answer questions during police interrogation.³⁵ Our subsequent discussion considers only this evidentiary aspect of the right to silence.³⁶ This Article discusses

³⁴ *Griffin*, 380 U.S. at 614-15.

³⁵ *Doyle*, 426 U.S. at 617-18.

³⁶ The contempt exemption is, indeed, easier to justify than the rule against adverse inferences. One can easily derive good reasons for upholding this exemption from the civil-libertarian theory, which sets appropriate limits to both the criminal sanction and its quasi-criminal derivatives. Under this theory, individuals should be protected not only *by*, but also *from*, the criminal justice machinery. Applications of criminal sanctions, therefore, must remain within the bounds of rational deterrence and proportionate retribution. Assuming that a guilty person rationally would choose the punishment for silence when it is less painful than the alternative, an appropriate adjustment to the punishment for silence must accompany the removal of the contempt exemption. Any such adjustment would involve some form of alignment of the punishment for silence with the punishment ordinarily imposed for the underlying substantive offense. A deterrence-based approach to the criminal sanction also would have to account for the probability that the relevant punishments will be imposed. The undue severity and the floating character that the punishment for silence must assume are plainly anomalous. It is, therefore, hardly surprising that even the most ardent critics of the right to silence call only for removal of the rule against adverse inferences and do not advocate the removal of the contempt exemption. See, e.g., ADVERSE INFERENCE, *supra* note 13, at 1111-12 (arguing that the privilege against adverse inferences must be repealed without removing the contempt exemption); WALTER V. SCHAEFER, THE SUSPECT AND SOCIETY: CRIMINAL PROCEDURE AND CONVERGING CONSTITUTIONAL DOCTRINES 59-71 (1967) (same); Henry J. Friendly, *The Fifth Amendment Tomorrow: The Case for Constitutional Change*, 37 U. CIN. L. REV. 671, 701, 714 (1968) (same); Paul G. Kauper, *Judicial Examination of the Accused — A Remedy for the Third Degree*, 30 MICH. L. REV. 1224, 1252, 1255 (1932) (same).

the privilege against self-incrimination granted to a witness who is not an accused only to the extent that it affects the pooling problem.³⁷

II. ZUGZWANG:³⁸ THE FIRST-MOVE DILEMMA OF A GUILTY SUSPECT

Game-theoretic methodology is particularly suitable for analyzing the rules that apply in criminal interrogation and trial: game theory focuses on a person's rational choice in a strategic situation, a game, in which the person's welfare also depends on actions chosen by others. These "others" become players in the game, and thus, an individual's best choice in a strategic situation depends on her beliefs about the choices that other players will make. A game-theoretic analysis is precise about the alternatives among which each player chooses, as well as about the information available to each player in forming the requisite beliefs. Game theorists are particularly interested in exploring the

³⁷ For a discussion of a witness's privilege against self-incrimination, see 1 MCCORMICK, *supra* note 12, § 116, at 427-28, §§ 138-140, at 515-28. Indeed, as argued by the late Professor Glanville Williams, it would be inaccurate to describe a compelled witness as possessing a right to silence, for he *must take the stand* when subpoenaed and may only refuse to answer incriminating questions. The right to silence, as a right not to utter a word, belongs only to criminal suspects and defendants. GLANVILLE WILLIAMS, *THE PROOF OF GUILT: A STUDY OF THE ENGLISH CRIMINAL TRIAL* 37-38 (3d ed. 1963). An assertion that criminal suspects and defendants have a privilege against self-incrimination would be equally inaccurate: the right to silence, as it belongs to defendants and suspects, is both broader and narrower than the privilege. For example, if a defendant chooses to testify in his defense, "[h]e cannot reasonably claim that the Fifth Amendment gives him . . . an immunity from cross-examination on the matters he has himself put in dispute. It would make of the Fifth Amendment not only a humane safeguard against judicially coerced self-disclosure but a positive invitation to mutilate the truth a party offers to tell." *Brown v. United States*, 356 U.S. 148, 155-56 (1958). See generally 1 MCCORMICK, *supra* note 12, § 134, at 493 (arguing that an accused's decision to testify at trial diminishes his rights under the privilege); WILLIAMS, *supra*, at 63-66 (same).

³⁸ The term "zugzwang," originally German, denotes a chess position in which a player whose turn it is to make a move prefers not to make one because any move would worsen her position. *THE CONCISE OXFORD DICTIONARY OF CURRENT ENGLISH* 1632 (Della Thompson ed., 9th ed. 1995). Outside of chess, the two-player game "Nim," involving several rows of circles, provides an example of zugzwang. In Nim, each player removes, during her turn, any number of circles from any row and tries to win the game by forcing her opponent to remove the last remaining circle. In Nim, the simplest form of zugzwang is:

oo
oo

In this position, the player who must make a move is held in zugzwang: if she removes any circle from the board, her opponent will remove two, and if she removes any two circles, her opponent will remove one. In chess, the following well-known position exemplifies zugzwang:

White: Kf8, Rh1, Pg6

Black: Kh8, Bg8, Ph7, Pg7. White to move.

In this position, White wins instantly by playing 1. Rh6, which places Black in zugzwang. If Black could pass, the game would end in a draw, but Black is not allowed to do so. Forced to move, Black must now either take the rook or play with the bishop. In the former case, Black will be checkmated by 2. Pg7, and in the latter, by 2. Rxf7.

effects of changing the game's rules, namely: the available alternatives (the action choices open to each player); the relevant payoffs (the consequences of different combinations of the players' choices, framed in utility units); and/or the information that each player can use to form his requisite beliefs. In this way, game theory forces anyone who proposes a rule change to take account of how players would respond to the change. This practical contribution of game theory is of special value in the criminal justice process. All parties to this process are aware of the strategic elements of criminal proceedings and know that the interests at stake are important.

Criminal interrogation has a number of other features that are important from a game-theoretic standpoint but have received little attention in the existing literature. The first of these features is the fundamental asymmetry of information between guilty suspects and other players. Guilty suspects know, idiosyncratic exceptions aside, that they have committed the crimes of which they are accused, whereas innocent suspects know that they have not committed those crimes. The police, in contrast, cannot always distinguish the guilty from the innocent. Moreover, although the police may know both that a crime has been committed and that a particular suspect is the perpetrator, interrogation is still necessary because the trier of fact does not possess the same knowledge. This asymmetry of information is one reason to allow the state, via the agency of the police, to infringe certain rights of criminal suspects.

The second important feature of the interrogation process concerns the various parties' knowledge of the availability of credible evidence. In some cases, simply because they committed the investigated crimes, guilty suspects may know more than any other party about the available or potentially available evidence. For example, knowledge that she was observed committing the crime might give a guilty suspect an advantage over innocent suspects who, by virtue of their innocence, cannot anticipate what a witness will say. This point is critical because suspects typically cannot provide entirely credible alibis. Because virtually all suspects want to be exonerated, triers of fact will tend not to believe proclamations of innocence that other evidence does not corroborate.

Another feature of criminal interrogation that adapts easily to game theory is the fact that suspects may not know what evidence the police already have or are likely to acquire. Indeed, it might be extremely difficult for the police to convince a suspect that they do in fact have evidence. The police are skeptical of suspects' proclamations of innocence — a rational response because guilty suspects also would make such claims were the police to believe them. For similar reasons, suspects are skeptical of interrogators' claims that they have evidence of guilt — a rational response because the police have strong incentives to induce confessions and close cases. In sum, interrogation is a com-

plex game, in which players have information that they may or may not be able to convey credibly to other players.

Experienced criminal defense attorneys and prosecutors both acknowledge that a suspect's initial response to police questioning — a game that the police may play without showing their hand to the suspect — generally is crucial to the case.³⁹ Interrogation is a game with asymmetric information. Virtually every suspect knows whether he "did it." A guilty suspect is privately aware of his guilt and, like innocent suspects, cannot credibly signal innocence to the police. Although the police do not know with certainty whether the suspect "did it," they are privately aware of the evidence identifying him as a possible perpetrator of the crime. Furthermore, the police have no obligation to familiarize the suspect with this evidence; even if they had the discretion to do so, they might not be able credibly to convey to the suspect that they have this — and only this — evidence. This game disadvantages the guilty suspect: he must bluff in order to signal innocence, but the police might discover his bluff, which would furnish further evidence of his guilt. In order to bluff successfully, the guilty suspect must be aware of the cards that the police hold. Not surprisingly, the police hold these cards close to their chests, while suspects must nevertheless make their moves.

This observation holds true in almost all cases save those that are exceptionally straightforward, in which conviction of the defendant can proceed without difficulty based on evidence other than his testimony. If this observation were untrue, we would not witness so many fights over the admissibility of defendants' initial responses at interrogation, both under the common law "voluntariness" principle⁴⁰ and under *Miranda*,⁴¹ or over which inferences the factfinder may draw from defendants' silence⁴² and lies.⁴³ We also would not witness so much controversy over the inferences that the factfinder may draw from a defendant's initial withholding of an alibi or other innocent ac-

³⁹ See, e.g., Kauper, *supra* note 36, at 1247.

⁴⁰ See generally 1 MCCORMICK, *supra* note 12, § 147, at 573 (stating that many confessions are contested on grounds of involuntariness).

⁴¹ *Miranda v. Arizona*, 384 U.S. 436, 440-42 (1966).

⁴² See 1 MCCORMICK, *supra* note 12, §§ 161-162, at 653-65.

⁴³ See, e.g., *People v. Rodrigues*, 885 P.2d 1, 42-43 (Cal. 1994) (allowing jury instructions that referred to a defendant's efforts to fabricate evidence); *People v. Lewis*, 786 P.2d 892, 899-900 (Cal. 1990) (stating that a defendant's false statements tended to show consciousness of guilt); *People v. Lang*, 782 P.2d 627, 648 (Cal. 1989) (exhibiting fierce litigation over the use of defendants' false statements as incriminating evidence); *State v. Ham*, 739 A.2d 1268, 1274-75 (Conn. 1999) (allowing an inference adverse to a defendant to be drawn from his material misstatements); *State v. Smith*, 592 A.2d 382, 385 (Conn. 1991) (permitting jury instructions that mandated a negative inference from a defendant's false statement).

count of events.⁴⁴ This unofficial “first-move principle” seems well entrenched in the practice of criminal law. Silence or false responses in the face of criminal accusations usually signal guilt.⁴⁵

The transformation of perceived signals of guilt into admissible evidence is an entirely separate issue. Even when fully informed of the relevant legal doctrines and rights arising therefrom, a guilty suspect cannot adequately assess the evidentiary implications of his first move. Because the suspect usually has no information about the evidence in the police’s possession, the evidentiary consequences of the signals that he sends are unclear at this initial stage. The only things that the suspect knows are that silence and lies usually indicate guilt and that the law enforcement authorities — the police and prosecutors — will utilize any such indications to the fullest extent that the law allows. Only guilty suspects face this dilemma. In contrast, for innocent suspects, telling a truthful story to the police can only improve (or at least not worsen) their position.⁴⁶

The right to silence, as developed in *Doyle* and *Griffin*, imposes constraints on commonsense reasoning by turning silent indications of guilt into generally inadmissible evidence. These constraints are limited, however, and the extent to which a suspect will benefit from them is impossible to determine at the first-move stage. At this stage, a suspect has only limited knowledge of the current evidence against him and is uncertain what evidence the police will obtain in the future.⁴⁷ For a guilty suspect, the choice between silence and lies, as his first-move alternatives to self-incrimination, therefore amounts to a choice between Scylla and Charybdis. Any such suspect is held in zugzwang, both psychologically and from a purely rational viewpoint. He prefers not to make any move because any move entails a substantial probability of worsening his position. On the one hand, if he were to opt for silence, he would subsequently find it difficult to challenge the prosecution’s evidence. Moreover, the police and prosecution would infer his factual guilt and would therefore devote more time and effort to securing his conviction. On the other hand, the police might use

⁴⁴ See, e.g., *United States v. DeVore*, 839 F.2d 1330, 1332 (8th Cir. 1988) (holding that a prosecutor may not comment on a defendant’s withholding of an alibi if the defendant’s behavior implicates the invocation of the right to silence but that a prosecutor rightfully may attack the inconsistency between two alibis and introduce any prior statement inconsistent with the defendant’s testimony).

⁴⁵ This observation may not hold true in a few special cases, such as when a suspect decides to remain silent because he distrusts the criminal justice system. Such cases are far removed from a typical criminal proceeding and have no bearing on our thesis. Our thesis holds, on rationalist grounds, that the right to silence helps the innocent. If there are additional reasons for supporting the same conclusion, we may well accept them.

⁴⁶ Once again, this observation may not apply to very special cases, which we ignore for lack of representativeness.

⁴⁷ The police may also be unable to signal their evidence to the suspect credibly.

evidence unknown to the suspect to expose a lie, increasing the likelihood of conviction.

Furthermore, the first move made by a guilty suspect limits his subsequent moves, thus affecting his entire trial strategy. If a suspect came forward with an innocent account of the events and then refused to answer the police's follow-up questions, he would expose himself to adverse inferences at trial.⁴⁸ Should the suspect's statement prove false, he would find it difficult to provide an exonerating alternative when confronted with probing questions. In addition, confronting the suspect with his prior falsehood would undermine the credibility of his later statement. At trial, the suspect would face impeachment as a witness as well as the possibility that his false first statement might contradict his testimony.⁴⁹ Alternatively, the prosecutor could introduce the defendant's first statement to impeach subsequent fabricated testimony. The prosecution might use this statement to show that the defendant did not provide important and potentially exonerating facts, included in his testimony, at the earliest possible opportunity.⁵⁰ If, instead of testifying, the defendant tried to adduce a belated statement as evidence, the prosecution might introduce the earlier statement to attack the defendant's credibility.⁵¹ Finally, the jury would likely convict the defendant if the prosecution produced evidence that proved convincingly that the defendant lied during police interrogation.⁵²

A suspect who chooses silence as a first move might also find it damaging to furnish an exonerating statement at a later stage. The police and the prosecution would view any such statement with distrust and would question the suspect's motives for delay. This delay would also impair the credibility of the suspect's belated statement and could prove damaging at trial. Furthermore, the police might attempt to refute the suspect's self-exonerating statement. If the police succeeded in discrediting the suspect's statement, his lies would further

⁴⁸ See, e.g., *United States v. Davenport*, 929 F.2d 1169, 1174-75 (7th Cir. 1991) (holding that the Fifth Amendment privilege does not allow a defendant to gain an advantage by selective disclosure and that there is no violation of the privilege if a police officer testifies about the gaps in the defendant's statement left by the defendant's refusal to answer questions).

⁴⁹ See, e.g., *DeVore*, 839 F.2d at 1332. See generally FED. R. EVID. 613 (stating the rules governing the impeachment of witnesses with prior inconsistent statements); 1 MCCORMICK, *supra* note 12, § 34, at 113-16 (discussing the use of otherwise inadmissible prior inconsistent statements for the purpose of impeaching witnesses).

⁵⁰ This method of impeachment would not violate the accused's Fifth Amendment protection. See, e.g., *Anderson v. Charles*, 447 U.S. 404, 408 (1980).

⁵¹ A self-exonerating statement would also constitute inadmissible hearsay if adduced by a non-testifying defendant. See FED. R. EVID. 801-804 (providing no hearsay exceptions for defendants' self-serving statements).

⁵² See Stephen Moston, Geoffrey M. Stephenson & Thomas M. Williamson, *The Effects of Case Characteristics on Suspect Behaviour During Police Questioning*, 32 BRIT. J. CRIMINOLOGY 23, 38-39 (1992) (finding that suspects normally do not change their original stories).

erode his credibility. However, if the police failed to establish that the suspect lied, convincing the factfinder of the suspect's guilt would become much more difficult. In such a case, the prosecution generally cannot use the suspect's silence and failure to provide a self-exonerating account as evidence in his subsequent trial. Nevertheless, the police and the prosecution would interpret these flaws in the suspect's account as signals of guilt. These signals would lead the police and the prosecution to concentrate their efforts on this particular suspect, and the suspect's fate would therefore depend on whether the police and the prosecution managed to find enough evidence to convict him.

Therefore, total silence is often the optimal choice for a guilty suspect. However, the strategy of total silence exacts a virtually certain price: the police and prosecution will believe that the suspect is guilty and proceed accordingly. This belief prevails until the suspect provides a convincing story of his innocence and a credible explanation for withholding the story. If the suspect does not provide an exculpatory statement at or before trial, the factfinder will regard the prosecution's evidence as uncontradicted,⁵³ substantially increasing the likelihood of conviction. Moreover, the factfinder may draw adverse inferences implicitly, even though the prosecution cannot suggest such inferences explicitly.⁵⁴ Faced with the possibility that his silence could work against him, the suspect might therefore consider producing an exonerating story at his trial. But if such a story first surfaced at trial, the prosecutor would imply concoction during cross-examination.⁵⁵

In sum, a suspect who opts for silence relies on uncertainty and doubt to obtain release or exoneration. This "raise-a-doubt" strategy distinguishes the suspect from those suspects who insist on their innocence. Obviously, each strategy has advantages and disadvantages. Assessing the situation properly is more difficult for a guilty suspect who must devise his strategy before knowing the evidence against him.

⁵³ See, e.g., *United States v. Bright*, 630 F.2d 804, 825 (5th Cir. 1980); *People v. Garcia*, 420 N.E.2d 482, 489 (Ill. App. Ct. 1981).

⁵⁴ This is common sense. *But see, e.g.*, CHRISTOPHER B. MUELLER & LAIRD C. KIRKPATRICK, *EVIDENCE* 357 (1995) ("Parties should be expected to anticipate and litigate issues of privilege in a manner that does not alert the jury. . . . If no adverse inference is permitted, the court should be willing to instruct the jury to this effect, although the party asserting the privilege may forego such an instruction to avoid highlighting the unwanted inference."). See generally Stephen A. Saltzburg, *A Special Aspect of Relevance: Countering Negative Inferences Associated with the Absence of Evidence*, 66 CAL. L. REV. 1011 (1978) (describing the significance of inferences that jurors draw from the absence of evidence).

⁵⁵ See *Portuondo v. Agard*, 120 S. Ct. 1119, 1127 (2000) (holding that no violation of the Fifth Amendment occurs if a prosecutor challenges a defendant's credibility by calling the jury's attention to the fact that the defendant had the opportunity to hear all the other witnesses and thus to tailor his self-exonerating testimony accordingly).

By moving first, the suspect inevitably increases his chances of conviction and thus worsens his position. Like the chess player in *zugzwang*,⁵⁶ the suspect prefers to pass but does not have this option. A guilty suspect's first move is therefore a choice between two types of damage: pretrial damage that the suspect will almost certainly incur if he opts for total silence and trial damage that the suspect may incur if he opts for lies at any stage of his interrogation.

The first type of damage is not as serious as the second, provided that the prosecutor fails to transform it into trial damage. Nevertheless, the first type of damage is virtually certain. The second type of damage (refuted lies as evidence of guilt), while less likely, is considerably more serious than the first. The probability of incurring the second type of damage depends on whether the police or prosecution find evidence that exposes the suspect's lies. This risk is not negligible. The likelihood that the pre-existing evidence refutes the suspect's story is relatively good given that it has already caused the police to single out the suspect. Moreover, the pre-existing evidence may lead the police to further evidence implicating the suspect. In addition, the police may obtain independent evidence that contradicts the suspect's statement. For example, a credible witness may surface and implicate the suspect.

Choosing to lie at stage one does have some advantages for the suspect, however. For example, the police may consequently shift their focus to other suspects if the lie is facially credible. The police may also release the suspect from custody, with or without bail, and he can use this break in the interrogation to set up an alibi, to remove incriminating evidence, or to intimidate potential prosecution witnesses.

The pretrial damage incurred by opting for silence is far from negligible. It is obviously dangerous for a suspect to render himself guilty in the eyes of the police and the prosecution. Making this move is tantamount to admitting guilt and challenging the police to obtain evidence that will convict. The police and prosecutors are likely to accept this challenge, investing substantial efforts to obtain a conviction. Such efforts will concentrate on the silent suspect (including accomplices) and will often succeed because the elimination of other suspects

⁵⁶ There is one important difference between *zugzwang* positions in games like chess and a suspect's first-move disadvantage. The latter is essentially an informational problem for a suspect, who remains largely ignorant about the future development of the investigation. When a chess-player is held in *zugzwang*, she is in a position to know with infallible accuracy how she will lose the game once she moves in one way or another. The inability to pass instead of making a move is her only problem. By contrast, a guilty suspect might be able to escape conviction if only he knew the true facts. But the *zugzwang* analogy is still both valid and useful because a suspect's position, with all its informational problems, would be much better were he able to pass instead of making the first move. By moving first, the suspect will inevitably increase his chances of conviction and thus will worsen his position.

will conserve the police's resources for the focused task of proving the silent suspect guilty.

From a guilty suspect's perspective, the two alternatives involve indeterminate risks, making it difficult to choose between them. Silence as a response to interrogation risks damaging the suspect's case, but the suspect may further damage his case by lying. Although silence is usually the better choice, suspects typically choose to lie for two reasons. First, opting for silence is difficult because it portrays the suspect as probably guilty in the eyes of the police and the prosecution.⁵⁷ Second, the damage incurred by silence is a *certain* price that the suspect pays to obtain immunity from the damage he *might* sustain by lying. Because the trial damage is more severe than the pretrial damage, rational guilty suspects perceive silence as less risky than lying. Many guilty suspects nevertheless take the riskier option, thus committing the "out of sight, out of mind" fallacy, labeled by cognitive psychologists as the "availability" heuristic that causes people to underestimate risks they irrationally perceive as too remote.⁵⁸ Like an average person who underinsures against risk,⁵⁹ a guilty suspect is usually unwilling to signal his guilt by maintaining silence at the pretrial stage. As a result, suspects do not exercise the right to silence very often either at interrogation or at trial.⁶⁰ Therefore, the right to silence cannot be responsible for many erroneous acquittals.

Contrary to the prevailing view, the proof-beyond-all-reasonable-doubt requirement also does not contribute significantly to the incidence of erroneous acquittals. First, innocent defendants are more likely to be acquitted at trial than guilty defendants. Accounts fur-

⁵⁷ To this obvious damage a guilty suspect might add the forfeiture of possible advantages associated with lying.

⁵⁸ See Jolls, Sunstein & Thaler, *supra* note 24, at 1477-78; Russell B. Korobkin & Thomas S. Ulen, *Law and Behavioral Science: Removing the Rationality Assumption from Law and Economics*, 88 CAL. L. REV. 1051, 1085-90 (2000) (examining the impact of the availability heuristic on the formation of legal policies); Amos Tversky & Daniel Kahneman, *Availability: A Heuristic for Judging Frequency and Probability*, in JUDGMENT UNDER UNCERTAINTY: HEURISTICS AND BIASES 163-78 (Daniel Kahneman, Paul Slovic & Amos Tversky eds., 1982) (summarizing the results of ten studies on the availability heuristic); Amos Tversky & Daniel Kahneman, *Judgment Under Uncertainty: Heuristics and Biases*, 185 SCIENCE 1124, 1127-28 (1974) (discussing the cognitive biases that result from a reliance on availability).

⁵⁹ See Jolls, Sunstein & Thaler, *supra* note 24, at 1477-78; Cass R. Sunstein, *Behavioral Analysis of Law*, 64 U. CHI. L. REV. 1175, 1183 (1997).

⁶⁰ See Paul G. Cassell & Bret S. Hayman, *Police Interrogation in the 1990s: An Empirical Study of the Effects of Miranda*, 43 UCLA L. REV. 839, 869 tbl.4 (1996) (reporting that only 9.5% of Mirandized suspects invoked their right to remain silent during police interrogations); Richard A. Leo, *Inside the Interrogation Room*, 86 J. CRIM. L. & CRIMINOLOGY 266, 275 tbl.2 (1996) (finding that 20.88% of questioned suspects invoked the right to silence, with 19.78% invoking the right at the outset of their interrogation); see also SUSAN EASTON, *THE CASE FOR THE RIGHT TO SILENCE* 133-43 (2d ed. 1998) (reporting and explaining the lower percentages of suspects in England and Wales who choose to exercise the right).

nished by innocent suspects are generally more credible than those provided by guilty defendants. A guilty defendant who successfully explains away incriminating evidence is either lucky or sophisticated enough to fabricate convincing stories, and false exculpatory stories gain credibility mainly from the scarcity of the incriminating evidence. More importantly, although the proof-beyond-all-reasonable-doubt requirement manifests a willingness to acquit numerous guilty defendants to prevent a relatively small number of wrongful convictions, the criminal justice system does not actually reach this outcome. The first-move dilemma, which often forces a guilty suspect to make a wrong move that contributes to his conviction, mitigates the potential social cost of acquitting numerous criminals.

Arguably, replacing the proof-beyond-all-reasonable-doubt requirement with a less demanding standard of proof would allow prosecutors to discredit more false stories. This change would produce more convictions and, correspondingly, more indictments of guilty suspects. However, such a change is also bound to exact a price. This price relates closely to our rationale for the right to silence.

A substantial reduction in the criminal proof standard would produce not only more convictions of innocent suspects,⁶¹ but also serious indeterminacy in suspect identification and selection. A lower standard for conviction would modify the incentives for guilty suspects. For example, a standard that guarantees conviction whenever the prosecution's evidence is uncontroverted would signal to the suspect that she can no longer rely on silence. More suspects would thus try to escape conviction by lying and thereby pooling with innocent suspects. There would be more cases in which innocent suspects would remove suspicion from guilty ones and also more cases in which guilty suspects would successfully divert suspicion to innocent people by fabricating facially credible self-exonerating accounts.

Indeed, our rationale for the right to silence only applies to a legal system with a proof-beyond-all-reasonable-doubt requirement. Because lies, unlike silence, are susceptible to refutation, this requirement prompts a guilty suspect to prefer silence to lies. By enlarging the spectrum of plausible stories from the accused, the proof-beyond-all-reasonable-doubt requirement also motivates some innocent suspects to come forward with their true stories, even those that extrinsic evidence cannot corroborate.⁶²

⁶¹ Traditionally, civil libertarians have condemned this increase in convictions of innocent suspects as part of their ongoing debate with supporters of law and order. A historical account of this debate appears in TWINING, *supra* note 8, at 100-08.

⁶² In our rational-choice analysis, this incentive is only a side benefit, for it applies only to those innocent suspects who might opt for exculpatory lies. Suspects may make such choices under a semi-rational belief that a false account will appear more credible in the factfinder's eyes than the

In Part III, we further identify and apply our new rationale for the right to silence. We demonstrate that the abolition of this right — that is, the introduction of adverse inferences against silent suspects and nontestifying defendants — would produce a harmful externality almost identical to the one that we discuss in this Part. But before we proceed, we remove a possible objection to our general approach. Some might disagree with our treatment of a typical suspect as a rational maximizer of welfare. Arguably, this treatment fails to capture the reality of police interrogation for neglected, alienated, weak, strained, subdued, or feeble-minded suspects or for suspects who suffer from drug and alcohol problems, personality disorders, or physical diseases. The police intimidate many such suspects, some of whom are juveniles, and often these suspects would say anything to please the interrogator. Some of these suspects would confess to almost any crime out of apathy. Police interrogate virtually all suspects in a hostile environment, subjecting them to physical and psychological pressures designed to make the suspects' choices irrational. When these choices become irrational, an abstract and cold-blooded game-theoretic framework cannot capture them.

In our opinion, this objection is fair only to the extent that it raises an important exception to the rationalist approach that this Article endorses. Yet such extreme cases are rare. Rationality in its rudimentary sense still appears to be the norm. This rationality is far from perfect. It is both constrained and truncated, and our analysis takes some of these limitations into account. But a typical suspect's behavior, on which this Article focuses, is also far from grossly irrational.⁶³ Empirical evidence suggests that suspects generally seek release and therefore attempt to be absolved of guilt. A typical suspect confesses to a crime only when confronted with evidence that he believes to be

truth. This incentive will persist as long as some real-world actors are boundedly rational. In the real world, the law must tell suspects unequivocally that true stories will satisfy reasonable doubt, except in the most unusual circumstances. Consequently, under the proof-beyond-all-reasonable-doubt requirement, more innocent suspects and defendants will tell the truth and expose it to interrogation. Both fully and boundedly rational suspects will make this socially preferable choice. Cf. BENTHAM, *supra* note 18; at 197 (introducing the "alarm" principle, under which the reduction of the criminal proof standard might drive innocent suspects into socially sub-optimal and personally irrational behavior); Richard A. Posner, *An Economic Approach to the Law of Evidence*, 51 STAN. L. REV. 1477, 1505 (1999) (arguing that a reduction of the criminal proof standard would enable the government to pursue predatory strategies by concentrating prosecutorial efforts on recalcitrant defendants in order to extract guilty pleas from the rest).

⁶³ Another response to the above objection is that suspects who are irrationally impelled to confess are also unlikely to be in a position to exercise their rights even when they receive the *Miranda* warnings. Consequently, any argument about the right's policy effects would apply only to the remainder of the population of suspects.

irrefutable⁶⁴ or when offered a tempting deal by the police or the prosecution. This empirical evidence is not the only factor justifying the economic approach adopted by this Article. This approach is also appropriate because we apply it to the most basic of economic instincts — that of self-preservation.⁶⁵

III. THE MODEL

This Part of the Article demonstrates that the right to silence actually helps innocent suspects, even if they do not exercise this right themselves. It also demonstrates that the exercise of this right by guilty suspects and defendants may increase social welfare. We use the word “may” because social welfare requires further analysis. Our first claim, however, is much more emphatic. We claim that innocent suspects and defendants decidedly benefit from the right to silence, which also yields potential benefits for social welfare.⁶⁶ We begin with an analysis of Bentham’s famous objection to the right to silence, also endorsed by contemporary opponents of the right. According to this objection, the right to silence benefits only guilty suspects. In what follows, we demonstrate that this objection is wrong. We subsequently present a game-theoretic model that substantiates our thesis and then explore its implications for the criminal standard of proof.

A. Bentham’s Objection to the Right to Silence

Our central claim rests on the breakdown of the principal objection to the right to silence, originally leveled by Bentham and subsequently espoused by present-day opponents of the right. This facially compelling objection has attracted both lawyers and politicians, many of whom are linked to the conservative “law-and-order” ideology. In accordance with its originalist tenor and for the sake of convenience, we

⁶⁴ See MICHAEL MCCONVILLE, CORROBORATION AND CONFESSIONS: THE IMPACT OF A RULE REQUIRING THAT NO CONVICTION CAN BE SUSTAINED ON THE BASIS OF CONFESSION EVIDENCE ALONE 29–32 (1993); Cassell & Hayman, *supra* note 60, at 894 tbl.8; Moston, Stephenson & Williamson, *supra* note 52, at 34–37.

⁶⁵ There is an additional reason why focusing on unsophisticated suspects would not change our analysis: such a suspect would replicate the choices that a reasonably sophisticated criminal would make. Suspects participating in our game might play equilibrium strategies either because they have thought through the consequences of their alternative choices or because they have seen what has happened when other suspects played the game and have learned from their mistakes. In the present context, this interpretation is also empirically plausible: it is very likely that criminals actually learn that silence is a good or bad idea from “word on the street” and from other “facts of life” that constitute criminal subculture. For a discussion of this theme by evolutionary game theorists, see DREW FUDENBERG & JEAN TIROLE, GAME THEORY § 1.2.5, at 23–29 (1991).

⁶⁶ For a discussion of the right’s impact on social welfare, see Daniel J. Seidmann, *Miranda Can Benefit Innocent Suspects Who Tell the Truth, and May Thereby Raise Social Welfare* (Mar. 2000) (unpublished manuscript, on file with the Harvard Law School Library).

will refer to it as "Bentham's objection." This objection holds that, subject to idiosyncratic exceptions, each person knows whether he committed the crime. Guilty suspects know that they are guilty, and innocent suspects know that they are innocent. As criminal conviction and punishment entail harm that a rational person wants to avoid, guilty suspects are eager to conceal the truth, whereas an innocent suspect's "most ardent wish" is to "dissipate the cloud which surrounds his conduct, and give every explanation which may set it in its true light."⁶⁷ An innocent suspect therefore demands the right to speak out, not the right to silence. Consequently, only the guilty demand the right to silence.⁶⁸

Bentham's objection appeared so compelling that it forced the advocates of the right to silence to abandon the consequentialist terrain. Indeed, moralism continues to permeate present-day justifications of the right. Such justifications allude to privacy,⁶⁹ as well as to the spiritual sanctity of confessions and remorse.⁷⁰ Some advocates of the right to silence emphasize the adversarial or individualistic notion of fairness, allegedly embedded in our criminal justice system⁷¹ and fiercely denounced by Bentham as the "fox-hunter's reason."⁷² These justifications also allude to the cruelty that would arguably result if criminal suspects and defendants were to face the "trilemma" consisting of confession, contempt, and perjury⁷³ — a point famously criticized by Bentham, with a reproachable flavor of ageism and sexism, as "[t]he old

⁶⁷ BENTHAM, *supra* note 18, at 241.

⁶⁸ *See id.*

⁶⁹ For writings discussing the privacy rationale, see sources cited *supra* note 15.

⁷⁰ *See generally* Gerstein, *supra* note 12 (arguing that the privilege against self-incrimination protects individual dignity). This idea has roots in the Judeo-Christian tradition in the form of *nemo tenetur prodere seipsum* (the principle understood by canonist writers to prohibit forcing a person to accuse himself publicly), see Stefan A. Riesenfeld, *Law Making and Legislative Precedent in American Legal History*, 33 MINN. L. REV. 103, 118 (1949), and עצמו ואין אדם משים עצמו רשע ("Every man is considered a kinsman unto himself . . . and no one can render himself a [villain]."), see AARON KIRSCHENBAUM, SELF-INCRIMINATION IN JEWISH LAW 50 (1970); see also LEVY, *supra* note 12, at 433-41 (explaining the Judeo-Christian origins of the privilege).

⁷¹ For discussions of the individualistic rationale, see sources cited *supra* note 16. For a discussion of the "fairness" rationale, see Bonventre, *supra* note 12, at 59-63; I.H. Dennis, *Reconstructing the Law of Criminal Evidence*, 42 CURRENT LEGAL PROBS. 21, 34 (1989); Kevin R. Reitz, *Clients, Lawyers and the Fifth Amendment: The Need for a Projected Privilege*, 41 DUKE L.J. 572, 583 (1991); and Sherwin, *supra* note 12, at 779.

⁷² 5 BENTHAM, *supra* note 8, at 238. In Bentham's words:

In the mouth of the lawyer, this reason, were the nature of it to be seen to be what it is, would be consistent and in character. Every villain let loose one term, that he may bring custom the next, is a sort of bag-fox, nursed by the common hunt at Westminster. . . . To different persons, both a fox and a criminal have their use: the use of a fox is to be hunted; the use of a criminal is to be tried.

Id. at 239.

⁷³ *See* sources cited *supra* note 13.

woman's reason."⁷⁴ Although these justifications of the right to silence are not devoid of merit, they leave a distinctive flavor of *petitio principii* by begging at least some pressing questions. As Bentham pointed out, what his fox-hunters and old women perceive to be "hard" and "unfair" others may view rather differently.⁷⁵ Thus, unless one embraces the dubious claim that a choice among several harmful outcomes is more painful than the outcomes themselves, the ultimate subject matter of the trilemma rationale is the harm associated with criminal punishment. But if a criminal punishment is rightfully imposed, why is it so harmful or cruel? A punishment is "cruel and unusual"⁷⁶ when it is cruel and unusual in and of itself, regardless of the right to silence. Indeed, any effective punishment must surely entail hardship, which some may describe as cruelty; and yet we can hardly consider eliminating criminal punishment.⁷⁷ Why, then, draw the line between permissible and impermissible hardness in a way that depends on the existence of the right to silence? This question may have a number of plausible answers, but none of these answers falls within the trilemma rationale for the right. The trilemma rationale can convincingly justify silence only in the form of the contempt exemption, so that suspects and defendants may remain silent without being punished.⁷⁸ This rationale cannot justify the rule against adverse inferences: excusatory grounds justifying the contempt exemption do not explain an additional evidentiary immunity.⁷⁹

⁷⁴ 5 BENTHAM, *supra* note 8, at 230; see TWINING, *supra* note 8, at 84.

⁷⁵ See TWINING, *supra* note 8, at 84-85.

⁷⁶ U.S. CONST. amend. VIII. As the Supreme Court held in *Solem v. Helm*, 463 U.S. 277 (1983), the Eighth Amendment's cruel and unusual punishment clause requires that a "criminal sentence must be proportionate to the crime for which the defendant has been convicted." *Id.* at 290. The objective factors regarding proportionality include "(i) the gravity of the offense and the harshness of the penalty; (ii) the sentences imposed on other criminals in the same jurisdiction; and (iii) the sentences imposed for commission of the same crime in other jurisdictions." *Id.* at 292. *But see* Harmelin v. Michigan, 501 U.S. 957, 962-65 (1991) (stating, in a part of Justice Scalia's opinion joined only by Chief Justice Rehnquist, that the Eighth Amendment does not require proportionality).

⁷⁷ See TWINING, *supra* note 8, at 84.

⁷⁸ See Stuntz, *Self-Incrimination*, *supra* note 12, at 1245-46.

⁷⁹ According to Professor William Stuntz, there are good reasons for excusing a defendant or a suspect who resorts to perjury in order to escape conviction. Such a person's private benefit from lying is very large in comparison to the harm caused. Therefore, as a matter of concession to human frailty, the state should not punish a perjurious defendant's lies. Consequently, silent defendants and suspects should not be penalized by adverse inferences from their silence because otherwise they will be forced to lie. See *id.* at 1242-80.

We disagree. Unlike Professor Stuntz, we do not see a good reason for excusing suspects' and defendants' perjury. As this Article demonstrates, such lies harm not only "the system," but also innocent suspects. Lies told by a guilty suspect assume a very particular form: they imitate the account of an innocent suspect in order to enable the guilty to pool with the innocent. This pooling undercuts the credibility of the stories told by innocent suspects. Therefore, this Article focuses primarily on this particular type of lie, a type that the existing literature seems to have overlooked.

The same critique applies, *mutatis mutandis*, to all other moralistic justifications of the right to silence, such as privacy and the adversarial or individualistic notion of "fairness."⁸⁰ Although these values are

We support the rule against adverse inferences from silence because of this further damage rather than on the excusatory grounds advanced by Professor Stuntz. To coin a phrase: perjury is pernicious rather than just morally distasteful or moderately harmful. We therefore endorse the rule against adverse inferences to provide guilty suspects and defendants with a viable alternative to perjury, which we believe should continue to be punishable rather than excusable. See 18 U.S.C. § 1001 (1994) (imposing criminal liability for making a false statement "in any matter within the jurisdiction of the executive, legislative, or judicial branch of the Government of the United States"); *Brogan v. United States*, 522 U.S. 398, 408 (1998) (declining to recognize an "exculpatory no" exception to criminal liability under 18 U.S.C. § 1001).

We disagree, however, with the rationales that have traditionally supported the rule against adverse inferences from silence. In *Doyle v. Ohio*, 426 U.S. 610 (1976), the Supreme Court held that drawing adverse inferences from a defendant's silence at interrogation violates the Due Process Clause, if that silence was preceded by a *Miranda* warning. *Id.* at 619-20. The Court based its holding on a reliance theory, stating that, "while it is true that the *Miranda* warnings contain no express assurance that silence will carry no penalty, such assurance is implicit to any person who receives the warnings. In such circumstances, it would be fundamentally unfair as well as a deprivation of due process to allow the arrested person's silence to be used to impeach an explanation subsequently offered at trial." *Id.* at 618. In the normative domain, however, this reliance theory clearly suffers from *petitio principii* and thus is not convincing. The reliance interest of a suspect can always be reshaped by modifying the *Miranda* warning in a way that notifies the suspect about adverse inferences. This possibility is not merely hypothetical: it is the practice in countries such as England and Israel. See Criminal Justice and Public Order Act, 1994, c. 34 (Eng.); Criminal Procedure Law (Enforcement Powers — Arrests), 1996, § 28(a) (Isr.). In *Murray v. United Kingdom*, 22 Eur. H.R. Rep. 29 (1996), the European Court of Human Rights held that drawing an adverse inference from silence is not a breach of the European Convention on Human Rights. *Id.* at 47. However, in *Saunders v. United Kingdom*, 23 Eur. H.R. Rep. 313 (1997), the same court held that forcing a defendant to testify would constitute a violation. *Id.* at 331. For a critical examination of the switch to adverse inferences from silence, see DENNIS, *supra* note 16, at 143-56. For a concise discussion of the British warning, see JENNY MCEWAN, EVIDENCE AND THE ADVERSARIAL PROCESS 173-74 (2d ed. 1998).

⁸⁰ Several commentators have also attempted to justify the right to silence as protecting innocent defendants who decline to testify out of fear of poor performance on cross-examination. Specifically, they argue that defendants fearful of impeachment by their prior convictions might decide not to take the stand. See Craig M. Bradley, *Griffin v. California: Still Viable After All These Years*, 79 MICH. L. REV. 1290, 1294 (1981) [hereinafter Bradley, *Griffin*] (noting that innocents may remain silent to avoid an adverse inference from their unconvincing demeanor, confusion, faulty memory, or prior convictions); Craig M. Bradley, *Silence at Sentencing*, TRIAL, Nov. 1999, at 87, 88-89 [hereinafter Bradley, *Silence*] (arguing that defendants primarily choose not to testify at trial because of fear of impeachment by prior convictions and suggesting that the *Griffin* doctrine prohibiting adverse inference helps the innocent as well as the guilty); Schulhofer, *supra* note 12, at 330-31 (arguing that there are many reasons for an innocent defendant not to take the stand).

This justification for the right to silence depends primarily on the prosecution's ability to impeach the defendant with his prior convictions. There would be no room for this justification in a system that disallowed prior-conviction impeachment of defendants and effectively instructed jurors that poor performance on the stand is not necessarily a sign of guilt or untrustworthiness. See Alex Stein, *The Refoundation of Evidence Law*, 9 CAN. J.L. & JURISPRUDENCE 279, 332 n.218 (1996) (arguing that abolition of *Griffin* could occur as part of a wholesale reform that tightened the criminal proof requirements and excluded the possibility of impeaching a testifying defendant with prior convictions, save for cases in which he placed his own character at issue); see also Criminal Procedure Law (Consolidated Version), 1982, § 163, 36 L.S.I. 65, (1981-82) (Isr.) (granting testifying

undeniably important, no one claims that they possess universal trumping capacity. Why, then, should these values override others in cases involving silent defendants and suspects? There may well be good reasons for holding that they should do so, but none of those reasons can be supplied from within. There is nothing intrinsic in privacy and other individualist values that should allow them to trump such objectives of the criminal justice system as deterrence and retribution. For example, the police could not detain or question suspects if privacy were the overriding objective. Courts could not hold criminal or civil trials if some extreme version of individualism trumped the duty to testify. Finally, the police could not elicit confessions from suspects if only remorseful suspects could validly confess. Bentham's claim that *petitio principii* weakens moralistic justifications of the right to silence therefore seems to have retained much of its force.

Supporters of the right to silence have apparently defended it in moralistic terms because they lacked a solid consequentialist justification. Those who firmly believe in something but cannot justify it on consequentialist grounds tend to proceed deontologically by claiming that it has an intrinsic value. More often than not, the success of such formulations is predicated on the absence of moral meta-principles, that is, on our general inability to resolve moral conflicts objectively. Thus, one can claim almost anything to be intrinsically valuable. However, in a world where *any* value can acquire this status and where many values are mutually inconsistent, no value can actually enjoy such status. These shortcomings of deontological reasoning bolster the advantages of consequentialism, and the discussion that follows should be judged against this backdrop.⁸¹

This discussion must begin with an issue that the existing literature has neglected: Bentham's argument that the right to silence helps only the guilty is, in fact, severely flawed in both form and substance. It contains both a logical non sequitur and an economic miscalculation that boil down to two substantive errors. As a matter of logic, innocent suspects can benefit indirectly from the right's existence, even if they do not exercise it themselves.⁸² Nothing logically excludes this possibility, which therefore requires consideration. In terms of substance, Bentham (together with his followers, including the present-

defendants a privilege against prior-conviction impeachment). This justification is also unconvincing on its own terms. See *infra* pp. 494–95.

⁸¹ For a general discussion of the consequentialist line of reasoning, see JOHN C. SMART & BERNARD WILLIAMS, *UTILITARIANISM: FOR AND AGAINST* 82–93 (1973).

⁸² We accept Bentham's claim that innocents rarely exercise the right to silence, and ignore the exceptional cases in which an innocent exercises the right. The existence of silent innocents does not enter into our model, in which *guilty defendants* separate from *testifying innocents* by exercising the right to silence.

day abolitionists⁸³) overlooks a substantial economic problem. Bentham and his adherents treat the right to silence as if it were a private consumption good: that is, one that only confers benefits on the person who consumes it.⁸⁴ This treatment, however, is the offspring of postulation rather than proof, and it turns out to be wrong on examination. In addition, Bentham and his followers fail to account for the intrinsically private nature of the information concerning guilt and innocence, respectively held by guilty and innocent suspects. This neglected insight immediately points to a host of signaling problems.

Finally, Bentham's argument blurs the crucial distinction between an *ex ante* and an *ex post* perspective. From an *ex post* point of view, Bentham's claim is irrefutable. Suppose that innocent suspects are never silent and that guilty suspects may be. If we know that a given suspect has been silent, then logic dictates that she must be guilty. Furthermore, given that inference, the conviction of that suspect cannot affect any innocent suspects. The problem with this argument is that it assumes a pattern of behavior (talkative innocents, silent criminals) as an unmodifiable given. But because suspects are not simply automata, they may change their behavior when the right to silence is introduced or revoked. For example, if guilty suspects alone were silent when the right to silence became available, then we could assess the right's impact only by considering whether guilty suspects would *otherwise* lie or confess. In short, we need an *ex ante* perspective to assess the effects of the right to silence.

The logic of Bentham's argument follows the economic principle of "revealed preference" that controls the consumption of private goods, in which "private" means that the consumer only cares about her own act of consumption. Economists have long argued that we can draw valid inferences about a consumer's welfare by observing her choices. For example, imagine a situation in which a consumer selects one of two bundles of private goods, *A* and *B*. If she chooses *A*, then the revealed preference principle states that her welfare would be unchanged if bundle *B* became unavailable and that her welfare would be at best unchanged, and possibly reduced, if bundle *A* became unavailable. Now suppose that a consumer always chooses bundle *B* over some other bundle *C*. Any consumer who chose *A* in preference

⁸³ See, e.g., Amar & Lettow, *supra* note 13, at 888-98; Dolinko, *supra* note 12, at 1065-68; Dripps, *supra* note 16, at 711-18; Friendly, *supra* note 36, at 679-95; John T. McNaughton, *The Privilege Against Self-Incrimination: Its Constitutional Affection, Raison d'Etire and Miscellaneous Implications*, 51 J. CRIM. L., CRIMINOLOGY & POLICE SCI. 138, 142-51 (1960); see also Green, *supra* note 16, at 628-29 (attesting to a broad consensus in the academic literature that the self-incrimination privilege lacks a coherent justification).

⁸⁴ The distinction between goods that do and do not entail benefits to others is important because Bentham glosses over a similar distinction between types of evidence.

to *B* could be no worse off if, instead, she had to choose between bundles *A* and *C*. However, a consumer who chose *B* from alternatives *A* and *B* could be worse off if forced to choose between bundles *A* and *C*. Finally, imagine that Consumers 1 and 2 could choose between *A* and *B* and between *B* and *C*. If both consumers chose *B* in preference to *C*, then a consumer who revealed her preference for bundle *A* over bundle *B* would be no worse off if she had to choose between *A* and *C* rather than between *A* and *B*.

By analogy to the consumption situation, an innocent suspect chooses between the alternatives of speaking out (*A*) and remaining silent, based on whether silence precludes an adverse inference (*B*) or allows it (*C*). Bentham implies that innocent suspects reveal their preference for speaking out (*A*) absent any right to silence. He therefore infers that the removal of the right to silence (that is, replacing *B* with *C*) for all suspects would not affect an innocent suspect's welfare. Conversely, guilty suspects who exercise the right (choose *B* over *A*) may be harmed by its revocation (when they must choose between *A* and *C*). Bentham then concludes that the right is undesirable because evidentiary rules should endeavor to reduce the welfare of criminals. According to Bentham and his followers, thieves and burglars must not gain admittance to a supermarket of legal rights.

The revealed preference principle, however, is inapplicable whenever the good in question is not private — namely, if Consumer 2's consumption decision affects Consumer 1's welfare (in economic terms, if consumption creates an externality).⁸⁵ Under these circumstances, Consumer 1 might care whether bundles *B* or *C* were available to Consumer 2, even if Consumer 1 chose bundle *A* in preference to both *B* and *C*. Suppose, for example, that someone likes the smell of cigarette smoke but intensely dislikes to smoke. This person would reject a proffered cigarette but would not favor a general ban on smoking, as she may spend her leisure time in bars enjoying other people's cigarette smoke. For that person, other people's consumption of cigarettes brings about a positive externality. Therefore, the revealed preference principle is inapplicable to that person's case.

We argue that this principle likewise does not apply to the right to silence. The suspects and defendants who exercise this right are typically guilty, but the good that they consume is not private. By exercising the right to silence, a guilty suspect abandons the lying alternative that would have involved perjurious pooling with innocents. Any such pooling might impair the credibility of statements given by innocent

⁸⁵ For a standard discussion of these economic concepts and phenomena, see ANTHONY B. ATKINSON & JOSEPH E. STIGLITZ, *LECTURES ON PUBLIC ECONOMICS* 482–87 (1980). See also RICHARD CORNES & TODD SANDLER, *THE THEORY OF EXTERNALITIES, PUBLIC GOODS, AND CLUB GOODS* 29–66 (1986).

suspects. By refraining from perjuringly pooling with innocents, a guilty suspect minimizes the risk of wrongful conviction faced by an innocent suspect. Bentham's argument breaks down because it ignores the fact that guilty suspects' perjured statements impose negative externalities on innocent suspects. These negative externalities are avoided when guilty suspects exercise the right to silence and thus confer positive externalities on innocent suspects. Innocent suspects, like the passive smoker in our example, would oppose the removal of the right to silence, even though they do not choose to exercise it.

To understand the pooling problem more fully, one must examine another problem that Bentham overlooks. The private nature of the information sought (also labeled the asymmetric information problem)⁸⁶ creates an opportunity for lying and cheating, which guilty suspects may exploit.⁸⁷ Guilty suspects generally know that they are guilty, while innocent suspects usually know that they are innocent. However, since this information is not generally observable, it remains hidden or private.⁸⁸ Bentham proceeds on the supposition that the more information one has, the more likely one is to reach a correct decision, and therefore he denounces the right to silence, along with other evidentiary rules that keep evidence out of factfinders' sight.⁸⁹ This natural assumption is misleading whenever private information is involved. In any such case, the critical issue is not whether one has, quantitatively, more or less evidence, but whether the evidence provides more or less *separation* between false and true signals. Hence, to ascribe credibility to any private information, factfinders require second-order (*separating*) information. This second-order information must, of course, itself be credible. Consequently, mere augmentation of private information — that is, of any information with uncertain credentials — could not increase the factfinder's accuracy.⁹⁰ Factfinders can only rely on private information if it is credibly transmitted; that is, it must be transmitted in a way that, at worst, minimizes false signaling.

Sellers of used cars present one example. These sellers typically cannot credibly inform potential buyers about the quality of their cars. Therefore, assuming that no other information is available, consumers cannot accurately discriminate among used cars and will pay no more

⁸⁶ See *supra* p. 443.

⁸⁷ IAN MOLHO, *THE ECONOMICS OF INFORMATION: LYING AND CHEATING IN MARKETS AND ORGANIZATIONS* 1-10 (1997) (noting that the opportunity to lie and cheat arises when there is asymmetric information).

⁸⁸ For a lawyer-friendly discussion of private information and the consequent signaling problem, see *id.* at 1-16, 63-111.

⁸⁹ 5 BENTHAM, *supra* note 8, at 1-8, 221-66.

⁹⁰ See Stein, *supra* note 80, at 279, 287-88 (uncovering the fallacy mentioned above in Bentham's theory of evidence and examining its implications for the law of evidence).

than the average price for any car offered for sale. Owners of the best used cars may therefore decide not to sell them, thereby reducing the average quality and price of secondhand cars. Faced with this situation, owners of the second-best used cars may also decide not to sell their cars, thus dragging the average car quality and price further down. This process will repeat itself until the market turns into a "market for lemons," offering only the poorest quality cars.⁹¹

Sellers who know that their cars are high quality but cannot back up the true claims about the value of their product will face skepticism from buyers; consumers will rationally ignore unsubstantiated claims because dishonest car dealers can replicate such claims. Conversely, a seller able to certify the quality of her car can credibly transmit this private information, separating herself from other dealers.

This car-seller problem is analogous to the situation faced by innocent suspects, who must decide whether to talk or to keep silent. Only an innocent suspect can provide entirely credible exculpatory evidence (for example, an ironclad alibi) to back up a proclamation of innocence. In this way, an innocent suspect who can provide such an alibi can separate herself from guilty suspects, just as a car seller might separate herself by certifying quality. Moreover, the abolition of the right to silence would not affect an innocent suspect with an ironclad alibi, for her rational decision to provide this alibi would protect her against any negative externalities that guilty suspects would produce by making false exculpatory statements. Yet this happy outcome depends on the innocent suspect's having an ironclad alibi. Absent such evidence, an innocent suspect's proclamation of innocence might not ensure acquittal, as guilty suspects could make exactly the same claim. For example, the trier of a rape case would rationally discount an unsubstantiated claim of consent because rapists as well as innocent suspects would make this claim if it were credible. In such cases, innocent suspects would pool with guilty suspects, just as high quality car sellers must pool with vendors of lower quality cars if they cannot certify the quality of their cars. If innocents and criminals pool, then, contrary to Bentham's argument, the right to silence might also benefit innocents.

The situation in most criminal cases involves neither the ironclad alibi, nor a total lack of evidence, but falls somewhere in between. The right to silence may induce innocent and guilty suspects to separate (the former talking and the latter remaining silent, as Bentham claimed); absent the right, guilty suspects might pool with innocent

⁹¹ See MOLHO, *supra* note 87, at 19-31. For the classic statement of the "market for lemons" problem, see George A. Akerlof, *The Market for "Lemons": Quality Uncertainty and the Market Mechanism*, 84 Q.J. ECON. 488 (1970).

suspects and thereby reduce the innocent suspects' welfare. In short, innocent suspects may gain from the right to silence without exercising it.

We can easily imagine a market (a court) in which a potential buyer (the factfinder) chooses between different exonerating statements offered by different suspects, some honest and some dishonest, seeking "to buy" only those statements that are true. In that market, the factfinder buys the suspects' statements, paying in the form of acquittal. Those suspects who cannot sell their statements to the factfinder are convicted, and therefore receive no payoff. This market for statements and the used-car market are similar in an important respect, which we already have mentioned. In both markets, the owners of quality goods are eager to remove their goods from the market to avoid pooling with owners of "lemons." The two markets, however, differ crucially: car owners can choose not to trade their vehicles, while suspects cannot opt out of the market for statements. Innocent suspects must trade their valid exculpatory statements along with the "lemons," with the result that factfinders will not buy some of those statements due to the private information problem. Thus, in this pooling environment, innocent suspects can neither remove true statements from the market nor sell them for their real value. Consequently, a rapist who falsely alleges consent reduces the credibility of any true claim of consent, a harm that is even more immediate in a setting involving numerous suspects. Measures, therefore, are necessary to drive false statements out of the market.

One possible measure is to increase the punishment for lies. However, such a measure would hardly be feasible. To deter perjury, the punishment for lies must exceed the punishment imposed for the underlying substantive crime.⁹² To the extent that people tell lies when they are likely to go undetected, the probability of detecting and successfully prosecuting liars is not very high. Hence, the punishment for lies would have to be even greater to ensure deterrence. The enormous

⁹² The following analysis by Professor Stuntz implies this result:

First, the threat [of being convicted of and punished for self-protective perjury] is frequently derivative: often the defendant will be convicted of perjury only if the government has enough evidence to convict him of the offense he denied committing. Therefore, the threat of punishment for perjury is primarily a threat of punishment in addition to that imposed for the underlying crime. Such a threat must be far less powerful than a threat of initial punishment because the marginal costs of criminal punishment to those already being punished decline steeply. Second, even if the government does have enough evidence to convict for perjury, the perjury conviction is not a certainty. The prosecutor or jury may show mercy, or the defendant may be able to win an acquittal on some now-unknown ground unrelated to his factual guilt. The defendant's choice thus boils down to nearly certain punishment for the underlying crime now versus potential punishment for perjury later.

Stuntz, *Self-Incrimination*, *supra* note 12, at 1253 (emphasis omitted) (footnotes omitted).

social costs involved in detecting and prosecuting liars would further aggravate this impractical solution.

Another possible measure is to pay the potential producers of false self-exonerating statements for verifiably true statements. Indeed, prosecutors routinely make such purchases through plea bargains and state-witness agreements.⁹³ Such purchases are also made by mitigating defendants' sentences when they enter guilty pleas.⁹⁴ In each of those cases, however, the price paid by the state may be quite substantial, depending on the value of the purchased true statement.

A much cheaper and therefore often preferable course of action is to purge the "lemons" without purchasing an expensive true statement. One can accomplish this result by buying off the potential producers of false statements — that is, by paying them an appropriate price for their *non-participation* in the statement market. This price is paid by allowing the potential producers of false statements (consisting predominantly of guilty suspects and defendants) to remain silent at their interrogations and trials without sustaining punishment or adverse inferences. Indeed, as we now make clear, one might consider this expense money well spent whenever it is incurred.

B. Formal Analysis

*"And, after all, what is a lie? 'Tis but
The truth in masquerade"*⁹⁵

In this section, we describe our simplified model of interrogation and explain why and when the right to silence benefits innocent suspects. Our argument, in brief, is that the fate of innocent suspects depends on the credibility of their true stories because innocents tell the truth at equilibrium (as Bentham claimed). If the evidence pointing to a suspect's guilt is weak, our model predicts that there will be no need to protect innocent suspects by providing a right to silence: Bentham's claim that the right helps only guilty suspects would then be correct. Our model also predicts that the right will be irrelevant when the incriminating evidence is sufficiently strong: the guilty suspect will then prefer to confess rather than seek refuge in silence. Most importantly, however, our model predicts that, if the evidence pointing to a sus-

⁹³ See Jeffrey Standen, *Plea Bargaining in the Shadow of the Guidelines*, 81 CAL. L. REV. 1471, 1489-97 (1993).

⁹⁴ See U.S. SENTENCING GUIDELINES MANUAL § 3E1.1(a) (1998); see also Criminal Justice and Public Order Act, 1994, c. 33, § 48 (Eng.) (noting that, in determining what sentence to impose on an offender who pleads guilty, the court must take into account the stage in the proceedings at which the offender indicated his intention to plead guilty and the circumstances in which this indication was given).

⁹⁵ GEORGE GORDON LORD BYRON, DON JUAN 366 (Modern Library 1949) (1823).

pect's guilt is of intermediate strength, then guilty suspects will separate themselves from innocent suspects by exercising the right to silence. In the absence of that right, guilty suspects would pool with innocents by falsely replicating their exculpatory statements and would thereby reduce the credibility of all suspects' statements. If disinterested witnesses did not exonerate suspects, then factfinders might (rationally) convict suspects who made such discredited statements, and innocent suspects might be wrongfully convicted. After presenting our model, we explain the equilibrium-solution concept (namely, how we propose to analyze the model). We then describe the strategies of an innocent suspect and of a guilty suspect, in each case with and without the right to silence. We conclude this section by specifying the model's testable implications.

We now focus on the right to silence at interrogation and present our argument with the help of a simplified, but nonetheless realistic, interrogation scenario. A crime has been committed, and the police detain someone (the suspect, *S*) on the basis of some circumstantial evidence. The police also have an eyewitness, *W*, who has met *S* once, and *S* can recall this occasion exactly. There are several possible occasions for the encounter, which we list as t_1, t_2, \dots through to t_n and t_c .⁹⁶ Each of these occasions is noncriminal, except for occasion t_c . In what follows, we assume for the sake of simplicity⁹⁷ that the suspects and the factfinder are all aware of these basic facts. We can represent the circumstantial evidence by a list of prior probabilities, each representing the chance that *S* met *W* on a given occasion.

The police show *S* to *W*, who reports the occasions on which he might have met *S*. We assume that *W* is potentially confused but reliable. *W* is potentially confused in that he may not be able to identify *S* and because he may not be able to identify exactly the occasion on which he met *S*; however, *W* is reliable because he always speaks the truth. Hence, his reports may be inconclusive, but he never falsely identifies any suspect. We suppose that *W* confuses the actual perpetrator of the crime with an innocent suspect whom he met on occasion t_i . Thus, *W* would exonerate *S* if the two had met on any innocent occasion other than t_i and would report, "I met the suspect either at the scene of the crime or on occasion t_i ," if *W* indeed had met *S* on one of those two occasions.

The police (and subsequently the prosecution and the court) will consider the account provided by *W* in light of the account provided

⁹⁶ One could think of each "occasion" as a number of meetings, and one occasion could be "no meeting." The crucial assumptions are that all possible meetings are included in some occasion and that no meeting is listed in more than one occasion.

⁹⁷ Otherwise, the model would unnecessarily involve complex probability measurements.

by each suspect, and vice versa.⁹⁸ Note that *W* need not be a witness; *W* could be any piece of circumstantial evidence that links the suspect to the crime.

W's reliability and his sincere confusion imply that the guilty suspect can only be acquitted if she claims to have met *W* on the occasion that *W* confuses with the crime (t_1). We assume, critically,⁹⁹ that the guilty suspect is uncertain of the identity of the innocent suspect with whom *W* confuses her. For example, the guilty suspect may not know whether *W* confuses her with the suspect he met on occasion t_1 , because both suspects have red hair, or with the suspect he met on occasion t_2 , because both suspects wear glasses.¹⁰⁰ The police now question

⁹⁸ Readers can vary the story above by imagining that the police suspect several people of the crime and that the suspect of the story is the one they choose to interrogate. The argument that we have made would also apply if the police interrogated some, but not all, of the suspects for a given crime. However, the argument would not work if the prosecution could prove to the jury that the police interrogated all of the possible suspects before charging the defendant. In that case, the prosecution could prove the charge against a defendant who had remained silent under interrogation by providing evidence that every other possible suspect had spoken to the police. Putting the hearsay issue aside, one could argue that the Fifth Amendment protection would allow the jury to draw an appropriate inference from the statements made by other suspects, rather than from the defendant's silence. Under such circumstances, it would not be in the interest of a guilty suspect to exercise her right, as this exercise would be equivalent to a confession. The right to silence would then be irrelevant.

Our model would remain unmodified if, instead of dealing with a single investigation, it addressed a series of unrelated investigations. Take, for example, a series of violent assault investigations that involve a number of guilty and a few innocent suspects. In each case, credible evidence (*E*) establishes that violence (a *v*-occasion) took place between each complainant and the relevant suspect. Each complainant claims that she was assaulted by the suspect without assaulting him first, an allegation that is true in most, but not all, cases. Each suspect considers the possibility of claiming that he acted in self-defense. As in our model, this scenario presents us with a series of *v*-occasions and with a distribution of prior probabilities that point to both the guilt and the innocence of the suspects. In the absence of the right to silence, innocent suspects will naturally claim self-defense, while guilty suspects will attempt to imitate innocent suspects by contending self-defense, in order to be acquitted. The police, the prosecution, and the courts will act against this backdrop. As in our model, the prior probabilities of guilt and innocence might therefore remain unchanged, to the detriment of innocents, because the credibility of stories told by the innocent would be diminished. This scenario admittedly involves some additional complexities, but, in the absence of offsetting methodological benefits, discussing them would be unduly laborious.

⁹⁹ This assumption is also realistic, given police interrogation practices and the virtual absence of disclosure rights prior to indictment and related proceedings. See FED. R. CRIM. P. 16; Crump v. Anderson, 352 F.2d 649, 654-55 (D.C. Cir. 1965) (noting that discovery rules apply only to proceedings following indictment); *In re Grand Jury Proceedings Involving Berkley & Co.*, 466 F. Supp. 863, 867 (D. Minn. 1979) (discussing discovery rights bestowed on defendants, which exclude discovery prior to indictment), *aff'd as modified*, 629 F.2d 548 (8th Cir. 1980). See generally United States v. Armstrong, 517 U.S. 456 (1996) (defining the scope of defendants' discovery rights under Rule 16); David Aaron, Note, *Ethics, Law Enforcement, and Fair Dealing: A Prosecutor's Duty to Disclose Nonevidentiary Information*, 67 *FORDHAM L. REV.* 3005, 3018-21 (1999) (reviewing prosecutors' statutory and regulatory disclosure obligations).

¹⁰⁰ Indeed, if she were certain about it, the guilty suspect would do better to lie about meeting *W* on that particular occasion instead of exercising the right to silence. This contingency, however, is largely irrelevant to the debate about the right to silence.

the guilty suspect, whose identity is unknown to others, forcing her to decide on her move. The guilty suspect's expectations with regard to her future trial crucially affect this decision.

At trial, the kind of evidence presented to the factfinder (henceforth the jury) depends on the legal regime. More specifically, it depends on whether the right to silence (in the form of immunity against adverse inferences, properly enforced) is available or not. If the right is available and the suspect exercises it by not replying to police questioning, then the jury will observe the circumstantial evidence and *W*'s report alone. Otherwise, the jury will consider the circumstantial evidence, the report, and the suspect's statement. The jury will use all the admissible evidence to form a (posterior) probability that the suspect is guilty. The jury will convict the suspect if this probability satisfies the controlling standard of proof. The jury will acquit the suspect if the probability falls below that standard. In other words, we make another, normatively correct, assumption that the jury will act as a faithful agent for society in accordance with the law. We also assume that the controlling standard of proof properly balances the social costs of the two miscarriages of justice: acquittal of the guilty and conviction of the innocent.

We exclude from consideration a number of other potentially realistic situations in which suspects are boundedly rational. As mentioned at the outset, an innocent suspect may exercise the right to silence if she thinks the jury will disbelieve her story because it is idiosyncratic, uncorroborated, or otherwise incredible. An innocent suspect may also exercise this right to protect a loved one or an accomplice who committed a more serious crime. An innocent suspect may even irrationally confess to a crime. Innocent suspects are not the only ones who may make choices induced by rational fears or choices that are plainly irrational or not strictly self-interested. As explained in Part II, a guilty suspect is held in *zugzwang* because she must choose among different moves (silence, lies, or confession), each of which worsens her position. Because such moves are typically made in the context of asymmetric information and stressful interrogation, guilty suspects often choose the worst possible move, which brings about the worse possible outcome. A guilty suspect may also decide not to exercise the right to silence on the theory that the jury would interpret her silence as evidence of guilt, thus ignoring the prohibition against adverse inferences. Finally, a guilty suspect may rationally confess to a crime in exchange for a reduction in punishment or on finding the incriminating evidence irresistible. More often than not, a guilty suspect confesses to a crime for both reasons, whether she calculates those reasons correctly or not. Confessions can also be made on irrational grounds; the confessor in these instances gains nothing from confessing to a crime. Confessing without receiving any premium is obviously disadvantageous to a self-interested guilty suspect unless the suspect hap-

pens to resemble Dostoevsky's Raskolnikov;¹⁰¹ if a good can be sold, it would be plainly irrational to give it away for free.

We recognize the possibility that suspects may make irrational choices. However, empirical evidence that points to a strong correlation between exercise of the right to silence and representation by legal counsel supports our assumption that most suspects who exercise the right to silence do so in a rational way.¹⁰² We should add that irrational possibilities are also largely irrelevant to a normative inquiry into the virtues and vices of the right to silence.

It is arguable that a jury will always become aware of the suspect's silence under *Miranda* and draw an adverse inference, contrary to the judge's instructions. If this were true, then silence would almost never avail a guilty suspect, who would be better off confessing (or lying, in appropriate circumstances). This supposition implies that variations in the legal regime, which would either allow or prohibit adverse inferences from silence, have no significant effect on interrogation outcomes. However, as demonstrated in Part V, the available empirical data decisively reject this implication. Accordingly, we proceed on the assumption that juries are either unaware of the suspect's silence during interrogation or ignore its implications when reaching their verdicts.

In light of the above assumptions, we can now examine the moves made by the players in the game, both the suspects and the jury. This examination combines the players' rationally formed expectations and motivations: each of the suspects, whether guilty or innocent, attempts to minimize (or totally eliminate) her sentence, while the jury tries to convict the guilty and acquit the innocent. This framework enables us to use the conventional game-theoretic tool known as Bayesian Nash Equilibrium (or equilibrium, for short).¹⁰³ This tool identifies the combinations of players' strategies that produce maximal payoffs for each player in the sense that none of the players can do better with another strategy, given her beliefs about the choices made by all the other players. Moreover, we presume these beliefs to be correct. Specifically, each suspect holds correct beliefs about how the jury responds to the available evidence, and the jury holds correct beliefs about the type of suspect who would make any particular statement. In sum,

¹⁰¹ See FYODOR M. DOSTOEVSKY, *CRIME AND PUNISHMENT* 536–41 (Constance Garnett trans., P.F. Collier & Son 1917) (1866).

¹⁰² See THE ROYAL COMMISSION ON CRIMINAL JUSTICE REPORT 54 (1993); see also Leo, *supra* note 60, at 286–87 (reporting that experienced suspects are more likely to invoke the right to silence).

¹⁰³ See generally DOUGLAS G. BAIRD, ROBERT H. GERTNER & RANDAL C. PICKER, *GAME THEORY AND THE LAW* 21, 202–08 (1994); FUDENBERG & TIROLE, *supra* note 65, § 8.1, at 321. For a philosophical appraisal of this approach, see Martin Hollis & Robert Sugden, *Rationality in Action*, 102 *MIND* 1 (1993).

each player's strategy is that player's best move in light of the strategies actually chosen by the other players.¹⁰⁴

1. *The Innocent Suspect's Strategy.* — It is in the innocent suspect's interest to tell the police the truth. The suspect's private information consists solely of her knowledge of the occasion on which she met our witness, *W*; thus we can think of her interrogation as the question "When did you meet *W*?" and can therefore treat her statement simply as a claimed occasion on which she encountered *W*. If the innocent suspect, *S*, met *W* on a noncriminal occasion, her true statement will be consistent with *W*'s report, since *W* is reliable. An innocent suspect knows this information. She also knows that any false exculpatory statement will be inconsistent with *W*'s report and that the jury will draw an adverse inference at equilibrium. Hence, an innocent suspect is better off telling the truth than making a false exculpatory statement. An innocent suspect is also at least as well off telling the truth as exercising the right to silence. Recall that the jury will rely on *W*'s report and the circumstantial evidence if *S* exercises the right. In the jury's eyes, the report and the circumstantial evidence imply that *S* is either sufficiently or insufficiently likely to have committed the crime. In the former case, the jury would convict a silent *S*; however, if the jury expected a guilty suspect to be silent, the jury would draw a favorable inference from any statement that is consistent with *W*'s report. In the latter case, in which *W*'s report and the circumstantial evidence are insufficient to convict, the jury would acquit a silent *S*, but the jury would also acquit her if she told the truth.

If juries could draw adverse inferences from defendants' silence, they would convict silent suspects at equilibrium; otherwise guilty suspects would choose to be silent. Hence, an innocent suspect also has no incentive to be silent when there is no right to silence.

The last possibility is that an innocent suspect might falsely confess to the crime. This choice would be rational if confession secured a sufficiently large remission of sentence relative to conviction, if *W* were sufficiently likely to confuse *S* with the guilty party, and if the jury would then regard *S* as sufficiently likely to be guilty and convict. However, the first of these conditions is empirically implausible: in most criminal cases, the premium for confession is negligible. This condition is also undesirable from a normative viewpoint; any substantial increase in the sentencing premium for confessions would undermine deterrence, and if the premium were not substantial, then a rational self-interested suspect (guilty or otherwise) would not confess to the crime. Therefore, under reasonable conditions on sentence remis-

¹⁰⁴ For a formal analysis of this example, see *infra* the Appendix. For a formal presentation of the entire model, see Seidmann, *supra* note 66.

sion, an innocent suspect would rationally tell the truth, irrespective of the evidentiary regime.

2. *The Guilty Suspect's Strategy.* — The guilty suspect's rational response to interrogation is more intricately tied to the model's parameters. We start by explaining why it may be in a guilty suspect's interest to seek asylum in the right to silence.

Suppose that *S* is, in fact, guilty. Before knowing the content of *W*'s report, *S* must choose whether to confess, be silent, or make an exculpatory statement by falsely claiming to have met *W* on some other *t*-occasion. If *S* makes a false statement, the jury will be informed of the statement, in addition to hearing *W*'s report and the circumstantial evidence. If *S* claims to have met *W* on an innocent occasion, but *W* tells the jury that he met *S* on a different occasion, perhaps even at the scene of the crime, the resulting inconsistency will induce the jury to consider *S* a liar and convict her. This risk generates a possible reason for exercising the right to silence. Given *S*'s silence and *W*'s report, however, the jury will still convict *S* if the circumstantial evidence against her is sufficiently strong. If this outcome is likely enough, *S* may have an incentive to risk a false statement in the hope that it will be consistent with *W*'s report and that the jury will draw a favorable inference from her cooperation with the police. In sum, *S*'s decision whether to exercise the right to silence depends on a balance of considerations that determine her chances of acquittal.

The options open to *S* in each evidentiary regime can be summarized by juxtaposing the circumstantial evidence with the controlling standard of proof. There is a taxonomy of cases relevant to those options, each of which depends on the strength of the circumstantial evidence and on the probability that *W* confuses the crime with each of the other *t*-occasions. We begin with cases in which the circumstantial evidence is relatively weak, and then we consider what happens as the evidence becomes stronger. We assume throughout that confessions secure a small but positive remission of sentence.

We suppose that *W* is more prone to confuse the crime with some *t*-occasions than with others. We refer to the occasion that *W* is most likely to confuse with the crime as the "suspicious" occasion, and we refer to the innocent suspect who met *W* on the suspicious occasion as the "suspicious suspect." We show that the right to silence may protect the suspicious innocent suspect.

Imagine that the circumstantial evidence is weak enough that the jury would not convict a suspect if the jurors knew that the suspect was either the guilty or the suspicious suspect. Absent the right to silence, the guilty suspect would claim to have met *W* on one of the innocent occasions. The jury would acquit her if her statement was con-

sistent with *W*'s report, and would convict her otherwise.¹⁰⁵ Under these circumstances, juries always acquit innocent suspects; a jury would draw a favorable inference from any exculpatory statement, which the guilty suspect would *not* make, and hence all innocents other than the suspicious suspect would be acquitted. Additionally, by assumption, the circumstantial evidence is weak enough that the jury would acquit a suspect as long as her statement did not contradict *W*'s report; thus the jury would also acquit the suspicious suspect.

Now suppose that the right to silence is available. If the circumstantial evidence is weak enough, the guilty suspect could not do better than exercising the right to silence, thereby separating herself from innocent suspects. The jury would therefore draw a favorable inference from any exculpatory statement, knowing that a guilty suspect would be silent; thus the jury would always acquit innocent suspects both with and without the right. By contrast, the guilty suspect might gain from exercising her right to silence, as she could thereby avoid the risk that an exculpatory statement would be inconsistent with *W*'s report: the jury would acquit a silent suspect whenever *W* confuses her with the suspicious suspect (and also when *W* confuses her with other innocent suspects). In sum, if the circumstantial evidence is weak enough, then the right to silence helps the guilty alone, just as Bentham claimed.

Now suppose the circumstantial evidence is strong enough that the jury will convict if *W* cannot tell whether *S* is the guilty or the suspicious suspect. There are two cases to consider on that assumption. In the first case, which we call "intermediate strength," the circumstantial evidence is sufficiently weak that the jury will acquit when *W* confuses the crime with some (unsuspicious) occasions. In the second case, which we call "strong evidence," the jury will convict when it hears that *W* has not exonerated *S*.

Consider the first case, in which the circumstantial evidence is of intermediate strength. Absent the right to silence, it is irrational for the guilty suspect to be silent (because the jury would draw an adverse inference) or to confess (because of the small remission of sentence). Therefore, the guilty suspect must always lie. The equilibrium requirement that the jury's beliefs are correct implies that the guilty suspect would choose randomly between exculpatory statements. In other words, the guilty suspect will sometimes claim to be the suspicious innocent suspect and will sometimes contend that she is another (non-suspicious) innocent suspect. The jury, in turn, will sometimes convict

¹⁰⁵ This option would be the guilty suspect's optimal choice because, by definition, any other false statement is less likely to be consistent with *W*'s report, because the jury would draw an adverse inference from silence and because confessions secure only a small remission of sentence.

if the statement is consistent with *W*'s report that the suspect is either suspicious or guilty. On the one hand, if the guilty suspect always claims to be the suspicious suspect, then she will always be convicted, as the circumstantial evidence is of intermediate strength, and she would thus do better to confess. On the other hand, if the jury expects that the perpetrator of the crime would never claim to be the suspicious suspect, then the jurors will draw a favorable inference from such a statement, and the guilty suspect would do better by claiming to be the suspicious suspect. Finally, at equilibrium, the jury will sometimes convict any suspect if *S*'s statement is consistent with *W*'s report that the suspect is either suspicious or guilty. If the jury did not do so, the guilty suspect would not rationally choose to mix between exculpatory statements.

In sum, in the absence of the right to silence, the guilty suspect would pool with the suspicious suspect, as when the circumstantial evidence is weak. In contrast to the weak case, however, in the case in which the prosecution's evidence is of intermediate strength, pooling imposes a negative externality on the suspicious innocent suspect, who would sometimes be convicted when *W* does not exonerate her.

If, however, the right to silence is available and the circumstantial evidence is of intermediate strength, the guilty suspect would once again choose silence. The guilty suspect exercises the right because the jury will acquit her if *W* confuses the crime with any innocent occasion, given that the joint probability of such occasions is large enough. Thus, the guilty suspect has no incentive to lie. By remaining silent, the guilty suspect therefore separates herself from the suspicious (and all other) innocent suspects. As a result, the jury draws a favorable inference from any exculpatory statement, and innocent suspects (who alone make such statements) are thus acquitted, regardless whether *W* exonerates them. Consequently, if the circumstantial evidence is of intermediate strength, the right to silence protects the suspicious innocent suspect from the negative externality (possible conviction) that ensues when the guilty suspect pools with her by replicating her (true) statement that she met *W* on the suspicious (but innocent) occasion. Therefore, contrary to Bentham's argument, the right to silence can protect innocent suspects who tell the truth.

Now consider the second case, in which the circumstantial evidence is so strong that the jury will convict whenever it knows that *W* has not exonerated *S*. The guilty suspect would never be silent, with or without the right to silence, as the jury will assuredly convict her. She would therefore do better to confess and enjoy the small but positive remission of sentence. The right to silence thus becomes irrelevant to behavior. In either evidentiary regime, the guilty suspect makes the same statement, sometimes confessing to the crime.

In sum, Bentham's conclusion that only criminals gain from the right to silence is correct only in cases in which the circumstantial evi-

dence presented by the prosecution is weak. In such cases, the guilty suspect gains by exercising the right without affecting the fate of any innocent suspect. Bentham's conclusion is wrong when the circumstantial evidence is of intermediate strength. In these cases, the guilty suspect exercises the right to silence and thereby helps the suspicious innocent suspect to avoid wrongful conviction.

These arguments are not directly susceptible to testing without second-guessing the judicial process by identifying miscarriages of justice. However, these arguments have implications that we can test against the available data. Recall that when the circumstantial evidence is not strong, the guilty suspect would choose silence if given the right and would make false exculpatory statements in the absence of the right. Additionally, when the circumstantial evidence is strong, the right to silence does not affect behavior. Thus, under the right-to-silence regime, those guilty suspects who would otherwise make false statements are induced to remain silent. Many other suspects might confess, as cross-national empirical evidence shows,¹⁰⁶ but these suspects would not switch to silence were the latter to become privileged.

This result depends on our assumption that confessions secure a small remission of sentence. As already indicated, this assumption derives from positive law. If, on the contrary, confessions secured a large enough remission, then we could show that abolition of the right to silence would induce some silent guilty suspects to confess. We return to this point in Part V, in which we compare our model's testable implications with the empirical data.

C. *The Role of the Criminal Proof Standard*

Our analysis thus far has fixed the standard of proof and varied the strength of the circumstantial evidence. We can also fix the strength of the circumstantial evidence and vary the standard of proof. For example, a stringent standard of proof will sufficiently protect innocent suspects, obviating the need for any ancillary protection offered by the right to silence.¹⁰⁷ In contrast, if there is a lax standard of proof, then guilty suspects would not exercise the right to silence, for it would not protect them from necessarily unfavorable witness reports. The right

¹⁰⁶ See *infra* Part V.

¹⁰⁷ Perhaps we are too charitable toward Bentham with regard to this point as well. In his time, proof beyond all reasonable doubt was far from an entrenched requirement. See generally George P. Fletcher, *Two Kinds of Legal Rules: A Comparative Study of Burden-of-Persuasion Practices in Criminal Cases*, 77 YALE L.J. 880 (1968) (discussing the different criminal proof requirements at common law together with their origins and rationales); Alex Stein, *From Blackstone to Woolmington: On the Development of a Legal Doctrine*, 14 J. LEGAL HIST. 14 (1993) (same); Theodore Waldman, *Origins of the Legal Doctrine of Reasonable Doubt*, 20 J. HIST. IDEAS 299 (1959) (same).

to silence can therefore protect innocent suspects only when the standard of proof is set at an intermediate level.

In our model (as in any adjudicative setting), changes in the standard of proof affect the functional strength of the relevant evidence. If the standard of proof is lowered, all incriminating evidence would become functionally stronger. If the standard is raised, all incriminating evidence would become functionally weaker. Thus, in this latter case, evidence previously considered strong would become evidence of intermediate strength. In other words, we can move a case from one category to another and thereby determine the desirability of the right to silence.

This observation suggests a potentially damaging critique of our defense of the right. In our analysis, the right to silence helps an innocent suspect only in those cases in which the circumstantial evidence that points to her guilt is of intermediate strength. In cases in which such evidence is overwhelmingly strong, the right to silence becomes irrelevant; in cases based on weak circumstantial evidence, the right to silence can only help guilty suspects. Arguably, a case falling into the intermediate category can be transferred into one of the other categories, in which the right does not benefit the innocent, by adjusting the controlling standard of proof. Technically, that adjustment can be achieved either by introducing a new standard of proof or by conferring the appropriate discretion on judges and juries.

We believe, however, that this argument is mistaken. Our refutation begins with the argument's less appealing alternative, a weaker standard of proof. One reason to reject this alternative is that its endorsement would increase the rate of wrongful convictions. Another, less obvious reason to reject this alternative focuses on other implications of turning weak evidence into functionally strong evidence. Evidence does not become stronger simply because one deems it strong for reasons that are unrelated to factfinding and that reduce the controlling standard of proof. Factual indeterminacy is an inherently epistemic factor. It does not disappear by virtue of a judgment certifying the existence of evidentiary sufficiency on non-epistemic grounds. Consequently, the relevant incentives of a guilty suspect in a system that softens the standard of proof would depend not only on her increased chances of conviction, but also on her prospects of being replaced by an innocent suspect and thus exonerated. In a system with a lower standard of proof, the possibility that evidentiary indeterminacy would lead to the conviction of an innocent suspect is far from negligible. This possibility would add to the guilty suspect's incentive to imitate the innocent by making a false self-exonerating statement. In the absence of the right to silence, this pooling strategy would become a guilty suspect's best alternative. Furthermore, even if the right to silence is available, guilty suspects would prefer this strategy in a large number of cases — for example, cases in which the suspect con-

siders it too risky to leave the circumstantial evidence unexplained. A guilty suspect's incentive to pool with the innocent would thus become rational. Because any substantial relaxation of the criminal proof standard would cause the pooling of the innocent with the guilty, it would both help and motivate the guilty to pool with the innocent. The benefits of such a relaxation (more convictions of the guilty) are sometimes claimed to justify its costs (more convictions of the innocent).¹⁰⁸ This claim, however, ignores the additional damage inflicted by the wrongful convictions that would occur in a pooling environment. This damage and its potentially negative impact on deterrence would further offset the benefits of relaxing the standard.¹⁰⁹

It therefore seems more appealing to raise, rather than to lower, the criminal proof standard. This alternative might provide an argument against the right to silence. Arguably, raising the standard would adequately protect the innocent from the risk of wrongful conviction. The cost of this benefit would be the functional weakening of incriminating evidence and the subsequent acquittal of more guilty suspects. Abolishing the right to silence, on the ground that the innocent no longer need it, could mitigate this result. Indeed, our own model has confirmed the validity of Bentham's abolitionist claim when applied to weak-evidence cases.

Our critics might argue along these lines and tell us that our model is vulnerable to the same argument that Bentham mounted against the theory that the right to silence protects suspects against oppressive interrogation. Bentham famously noted that the medicine is wrong even if the diagnosis is right. The correct social response to oppressive interrogation, he argued, is to reform interrogation procedures — for example, by introducing and meaningfully enforcing both disciplinary and criminal sanctions against police officers found guilty of oppressive behavior — rather than to give suspects a right that is otherwise undesirable.¹¹⁰

¹⁰⁸ See Alan Wertheimer, *Punishing the Innocent — Unintentionally*, 20 INQUIRY 45 (1977).

¹⁰⁹ For models of civil verdicts with this property (false positives reduce deterrence), see I.P.L. Png, *Optimal Subsidies and Damages in the Presence of Judicial Error*, 6 INT'L REV. L. & ECON. 101, 103 (1986); and A. Mitchell Polinsky & Steven Shavell, *The Economic Theory of Public Enforcement of Law*, 38 J. ECON. LITERATURE 45, 60–62 (2000). For models in which wrongful convictions do not harm deterrence, see Daniel J. Seidmann, *Deterrence v. A Reasonable Level of Doubt* (Nov. 1997) (unpublished manuscript, on file with the Harvard Law School Library).

¹¹⁰ See 5 BENTHAM, *supra* note 8, at 240–43; see also Richard A. Posner, *Excessive Sanctions for Governmental Misconduct in Criminal Cases*, 57 WASH. L. REV. 635, 639–43 (1982) (criticizing the exclusionary rule under which evidence obtained in violation of a suspect's rights is rendered inadmissible to deter future police misconduct); cf. Posner, *supra* note 62, at 1533 (arguing that substitution of the exclusionary rule with nonexclusionary sanctions would not contribute to adjudicative accuracy because, if the new sanctions adequately deterred the police, the police would not obtain evidence presently subject to the exclusionary rule).

This argument calls for a comprehensive assessment of the relevant utilities and disutilities that determine social welfare. We have demonstrated that the right to silence reduces convictions of both innocent and guilty defendants. The right would therefore be desirable if the social benefits of fewer wrongful convictions exceeded the social costs of more erroneous acquittals. The requisite cost-benefit calculation is beyond the scope of this Article. Nevertheless, we end this Part with some observations about this issue.

The formulation of a plausible social welfare function that balances the two miscarriages of justice is the principal task that an economic analysis of this issue would discharge. We now sketch two possible approaches to this problem.

Thus far, we have treated the standard of proof as an exogenous variable in our analysis and have assumed that whether the admissible evidence meets this fixed standard will determine the verdict. The more complete model that one of the present authors uses in a separate article can replace this approach to the criminal proof standard. This model treats the jury as a player whose preferences reflect the social tradeoff between wrongful convictions and wrongful acquittals.¹¹¹ It is therefore possible to calculate the social welfare effect of the right to silence by comparing the jury's payoffs in two legal regimes, one with a right to silence and the other without it. Under this model, the right is not socially justifiable because the social costs incurred due to the increased number of wrongful acquittals exceed the social benefits from any reduction in wrongful convictions. Such an appraisal, however, is not robust with respect to changes in the model. This conclusion is reached by analyzing a related model, in which the severity of the relevant crimes (one a felony and the other a misdemeanor) and the criminal's identity are both uncertain. In this model, the right to silence separates misdemeanants from felons, as well as both types of criminals from innocent suspects. Specifically, at equilibrium, felons exercise the right to silence and misdemeanants credibly confess. Consequently, the jury rationally believes innocent suspects' true statements. Absent the right to silence, the jury might not believe the misdemeanant's confession, for if it were credible, then the felon — whose only option is to give a statement to the police and subsequently to testify in court — would have an incentive to confess falsely to the misdemeanor. At equilibrium, both types of criminals would therefore make exculpatory statements. Thus, it is possible that innocent suspects would be wrongfully convicted of misdemeanors and that misdemeanants would be wrongfully convicted of felonies. In this model,

¹¹¹ See Seidmann, *supra* note 66, at 9-21.

the net effect of the right to silence is an increase in the jury's payoff, that is, an augmentation of social welfare.¹¹²

The existing law-and-economics literature offers an alternative approach to calculating the right's social benefits. Following Professor Gary Becker,¹¹³ this literature defines social welfare in terms of the harm suffered by the victims of crime, on the one hand, and the costs of detecting and punishing crime, on the other hand. The optimal criminal justice system deters crime subject to these costs.¹¹⁴ The adoption of a similar approach could help to evaluate the effects of the right to silence. The law-and-economics literature contains various examples of how to assess evidentiary rules employing this approach.¹¹⁵

Finally, assuming that the right to silence can increase social welfare, the right's desirability still depends on empirical questions such as how many innocent suspects would otherwise be convicted. We note throughout this Article that this figure is inherently unquantifiable.

IV. THE DOCTRINAL FIT

This part of the Article demonstrates that our rationale for the right to silence provides the most plausible explanation for the right and its doctrinal ramifications. Our discussion begins with the principle that confines the right to compelled testimonial activities, as opposed to the compelled production of physical evidence. We demonstrate that the traditional distinction between testimonial and physical evidence fails to account for the Supreme Court's jurisprudence and argue that our anti-pooling rationale fully explains this jurisprudence. We then show how our approach justifies the same-sovereign limitation of the Fifth Amendment privilege. Next, we describe how our anti-pooling rationale supports the doctrines that confine the privilege to criminal proceedings and to custodial interrogation. Finally, we

¹¹² Note that the abolition of the right to silence would also reduce the confession rate by undercutting the credibility of misdemeanants' confessions.

¹¹³ Gary S. Becker, *Crime and Punishment: An Economic Approach*, 76 J. POL. ECON. 169 (1968).

¹¹⁴ For a recent survey of this literature, see Polinsky & Shavell, *supra* note 109.

¹¹⁵ See, e.g., Chris William Sanchirico, *Relying on the Information of Interested — and Potentially Dishonest — Parties*, 3 AM. L. & ECON. REV. (forthcoming 2001) (on file with the Harvard Law School Library) (demonstrating how optimal deterrence can be achieved by directly conditioning damages on the evidence that parties choose to present); Joel Schrag & Suzanne Scotchmer, *Crime and Prejudice: The Use of Character Evidence in Criminal Trials*, 10 J.L. ECON. & ORG. 319 (1994) (explaining how rules for restricting character evidence inform the observation that, if the jury is prejudiced against habitual criminals, the subjective cost of wrongful convictions will decline, and thus, the jury may impede deterrence by its punitiveness). See generally Posner, *supra* note 62.

analyze *Griffin v. California*,¹¹⁶ which forbids triers of fact from drawing adverse inferences from the defendant's failure to testify in court, as well as *Mitchell v. United States*,¹¹⁷ which extended *Griffin* to sentencing proceedings.¹¹⁸ This analysis further exhibits the strength of our rationale as an explanatory tool.

A. *The Schmerber Doctrine: Confining the Right to Compelled Testimonial Activities*

The Fifth Amendment privilege protects suspects and defendants only from the compelled production of *testimonial* evidence against themselves; the privilege does not restrict compelled production of physical evidence.¹¹⁹ However, both the meaning of this limitation and its underlying rationale are problematic. As the Supreme Court has acknowledged, both the production and the nonproduction of physical evidence have certain communicative aspects that are functionally similar to testimony.¹²⁰ In some cases, this acknowledgment has led to an expansion of the privilege.¹²¹ In other cases, however, ostensibly similar expansionist attempts have failed.¹²² The Court thus has gradually eroded the distinction between testimonial and physical evidence and replaced it with a complex doctrine. This doctrine has lacked an organizing principle. We now demonstrate that our anti-pooling rationale provides such a principle.

Consider a suspect whom the police ask to submit to a breathalyzer examination for blood alcohol. Is her refusal to undergo this examination testimonial evidence? Apparently, it is: refusal to undergo the examination communicates the suspect's guilty conscience. Do the privacy, free agency, and individualism rationales for the privilege apply to this type of evidence? Apparently, they do: because the suspect was compelled either tacitly to acknowledge her guilt by divulging her private thoughts or to produce self-incriminating physical evidence, there seems to be no difference between her case and the case of ordinary

¹¹⁶ 380 U.S. 609 (1965).

¹¹⁷ 526 U.S. 314 (1999).

¹¹⁸ Our preceding discussion fully justifies *Doyle v. Ohio*, 426 U.S. 610 (1976), which forbids triers of fact from drawing adverse inferences from the defendant's silence at interrogation, *id.* at 617-18.

¹¹⁹ See *Pennsylvania v. Muniz*, 496 U.S. 582, 589 (1990); *Doe v. United States*, 487 U.S. 201, 210 (1988); *Schmerber v. California*, 384 U.S. 757, 761 (1966); *Holt v. United States*, 218 U.S. 245, 252 (1910).

¹²⁰ See, e.g., *United States v. Hubbell*, 120 S. Ct. 2037, 2043 (2000); *Muniz*, 496 U.S. at 594-98.

¹²¹ See, e.g., *Hubbell*, 120 S. Ct. at 2048 (holding that the act of producing documents may be testimonial); *United States v. Doe*, 465 U.S. 605, 612-14 (1984) (same).

¹²² See, e.g., *Muniz*, 496 U.S. at 592 (defining "testimonial" evidence restrictively); *Doe*, 487 U.S. at 210-11 (same); *South Dakota v. Neville*, 459 U.S. 553, 564 (1983) (same).

testimonial compulsion.¹²³ The Supreme Court, nonetheless, has repeatedly answered the above questions in the negative.¹²⁴ Following Wigmore¹²⁵ and, presumably, the accepted definition of hearsay,¹²⁶ it has held that conduct evidence counts as testimonial only when it is *intentionally assertive*, that is, when it indicates the person's intentional expression of her thoughts concerning factual matters.¹²⁷ But the Court has also explicitly acknowledged that the issue is difficult¹²⁸ and that the outer boundaries of the testimonial category — as opposed to its core notion — are unclear.¹²⁹

Employing the anti-pooling rationale for the Fifth Amendment privilege can resolve the problem of distinguishing between physical evidence and testimonial evidence. According to this rationale, the privilege would apply if the pooling-through-lying alternative is available to a guilty suspect. In other words, when a suspect is required to provide evidence that can reduce the credibility of an innocent suspect's evidence, the privilege would apply. Only such externality-laden evidence would be testimonial for Fifth Amendment purposes. Verbal statements and their nonverbal equivalents, such as the nodding of one's head to communicate assent, would be testimonial. In addition, evidence would be testimonial if the suspect who produced it could shape its content. Thus, handwriting samples that a suspect produces at the police station would be testimonial because a criminal might replicate an innocent person's handwriting. Past samples of the suspect's handwriting, however, would constitute physical evidence. The present production of a handwriting sample by a suspect, unlike preexisting handwriting samples, is always coupled with an explicit or implicit testimonial confirmation, namely, "This is my handwriting." The probative value of preexisting handwriting samples that the suspect allegedly wrote does not depend on the suspect's explicit or implicit confirmation; any qualified expert witness or nonexpert witness personally familiar with the suspect's handwriting can authenticate such

¹²³ See EASTON, *supra* note 60, at 207–35 (denouncing the testimonial/physical evidence distinction as a functionally unsuitable rationale for the privilege and as based on a philosophically questionable dualism between "mind" and "body"); Peter Arenella, Schmerber and the Privilege Against Self-Incrimination: A Reappraisal, 20 AM. CRIM. L. REV. 31, 36–42 (1982) (criticizing the testimonial/physical evidence distinction as unsuitable for determining the limits of the privilege).

¹²⁴ See *Neville*, 459 U.S. at 564; see also *Muniz*, 496 U.S. at 592; *Doe*, 487 U.S. at 217–19.

¹²⁵ 8 WIGMORE, *supra* note 16, § 2265, at 386.

¹²⁶ See FED. R. EVID. 801(c). In England, the definition of hearsay covers every implied assertion, both intended and unintended. See *R v. Kearley*, 2 All E.R. 345, 348–49 (H.L. 1992); *Wright v. Tatham*, 112 Eng. Rep. 488, 500 (K.B. 1837).

¹²⁷ *Muniz*, 496 U.S. at 590–92.

¹²⁸ See *Doe*, 487 U.S. at 214–15.

¹²⁹ See *Muniz*, 496 U.S. at 589. For a recent discussion and critique of this approach, see Krysten M. Kimmett, *Fifth Amendment at Trial*, 87 GEO. L.J. 1627 (1999).

samples.¹³⁰ A police request to provide a handwriting sample amounts to testimonial compulsion that the Fifth Amendment privilege should prohibit.

This distinction between handwriting samples is admittedly incongruent with existing caselaw. In *Gilbert v. California*,¹³¹ the Supreme Court held that compelling suspects to provide handwriting samples is not prohibited by the privilege.¹³² Various federal courts of appeals have applied *Gilbert's* holding,¹³³ including the Third Circuit, which effectively rejected the "tacit acknowledgment theory."¹³⁴ The tacit acknowledgment theory maintains that the production of handwriting samples by a suspect entails testimonial confirmation and is thus equivalent to stating, "This is my handwriting." We believe that those holdings are not only unjustifiable, but are also inconsistent with the "act-of-production" doctrine that the Supreme Court established to cover the compelled production of documents. According to the act-of-production doctrine, preexisting documents do not count as testimonial for purposes of the privilege; yet the compelled production of documents is testimonial when it entails the person's admission that the records exist, that they are in his possession or control, and that they are authentic.¹³⁵ Based on the facts of *United States v. Doe*,¹³⁶ the Supreme Court classified the act of production as testimonial evidence that required "use immunity."¹³⁷ The holding in *Doe* is manifestly inconsistent with *Gilbert*.

The Court's recent decision in *United States v. Hubbell*¹³⁸ reveals that our anti-pooling rationale for the Fifth Amendment privilege ex-

¹³⁰ See FED. R. EVID. 901(b)(2)-(3).

¹³¹ 388 U.S. 263 (1967).

¹³² *Id.* at 266-67.

¹³³ See, e.g., *United States v. McDougal*, 137 F.3d 547, 559 (8th Cir. 1998) (holding that compelled production of a handwriting sample is not a violation of the Fifth Amendment because handwriting is physical, rather than testimonial, evidence); *United States v. Tanoue*, 94 F.3d 1342, 1345 (9th Cir. 1996) (same); *United States v. Stone*, 9 F.3d 934, 942 (11th Cir. 1993) (holding that the Fifth Amendment does not prohibit adverse inferences drawn from a defendant's refusal to provide handwriting samples).

¹³⁴ *In re Special Fed. Grand Jury Empanelled October 31, 1985*, 809 F.2d 1023, 1026 (3d Cir. 1987) (holding that compelling a witness to provide "normal" handwriting samples with a "backward slant," when such a slant was concededly not his normal writing style, did not constitute a testimonial admission).

¹³⁵ *United States v. Doe*, 465 U.S. 605, 613 n.11 (1984) (citing *In re Grand Jury Empanelled March 10, 1980*, 541 F. Supp. 1, 3 (D.N.J. 1981)).

¹³⁶ 465 U.S. 605 (1984).

¹³⁷ *Id.* at 616. The Court also decided that this immunity can be granted only on a statutory request and cannot be imposed judicially. *Id.* Under the "use immunity" provided for in 18 U.S.C. § 6002 (1994), although the government may use the subpoenaed documents, it may not use any information directly or indirectly derived from the act of their production in any criminal proceeding against the person (except a prosecution for perjury, for giving a false statement, or for failing to comply with the document production order). *Id.*

¹³⁸ 120 S. Ct. 2037 (2000).

plains the "act-of-production" doctrine. In that case, the government subpoenaed Hubbell to produce a large number of unspecified documents relating to the "Whitewater" criminal investigation before a grand jury.¹³⁹ Hubbell invoked the privilege against self-incrimination in response to the subpoena.¹⁴⁰ The government was unable to describe the subpoenaed documents with reasonable particularity but nevertheless obtained an order issued under 18 U.S.C. § 6003(a)¹⁴¹ forcing Hubbell to produce the documents subject to "use immunity."¹⁴² The government then used these documents in an investigation that led to tax and fraud charges against Hubbell.¹⁴³ Hubbell contended that the charges should have been dismissed because their substantiation required reliance on the immunized testimonial aspects of his production of the documents.¹⁴⁴ The government agreed with the principle behind this contention and accepted that a mandatory dismissal of the indictment against Hubbell would result if a violation of his privilege had indeed occurred.¹⁴⁵ However, the government disputed the alleged violation of the privilege on the ground that Hubbell's act of production was insufficiently testimonial.¹⁴⁶ The government cited *Fisher v. United States*¹⁴⁷ to support its proposition. The *Fisher* Court had held that a taxpayer's response to a subpoena for documents did not represent a substantial threat of self-incrimination because the "taxpayer did not prepare the papers and could not vouch for their accuracy."¹⁴⁸

The *Hubbell* Court rejected the government's interpretation of *Fisher* in an 8-1 decision. Writing for the majority, Justice Stevens stated:

The assembly of literally hundreds of pages of material in response to a request for "any and all documents reflecting, referring, or relating to any direct or indirect sources of money or other things of value received by or provided to" an individual or members of his family during a 3-year period . . . is the functional equivalent of the preparation of an answer to either a detailed written interrogatory or a series of oral questions at a discovery deposition.

¹³⁹ *Id.* at 2040.

¹⁴⁰ *Id.*

¹⁴¹ 18 U.S.C. § 6003(a) (1994).

¹⁴² *Hubbell*, 120 S. Ct. at 2040.

¹⁴³ *Id.* at 2041.

¹⁴⁴ *Id.*

¹⁴⁵ *Id.* at 2047.

¹⁴⁶ *Id.*

¹⁴⁷ 425 U.S. 391 (1976).

¹⁴⁸ *Id.* at 413.

... It was only through respondent's *truthful reply* to the subpoena that the Government received the incriminating documents

....

... The assembly of those documents was like telling an inquisitor the combination to a wall safe, not like being forced to surrender the key to a strongbox.

....

... While in *Fisher* the Government already knew that the documents were in the attorneys' possession and could independently confirm their existence and authenticity through the accountants who created them, here the Government has not shown that it had any prior knowledge of either the existence or the whereabouts of the 13,120 pages of documents ultimately produced by respondent.¹⁴⁹

The Court therefore ordered the dismissal of the indictment against Hubbell.¹⁵⁰

As the Court effectively acknowledged, the doctrinal web accommodating both *Fisher* and *Hubbell* cannot also accommodate the distinction between testimonial and physical evidence. "Testimony," as a concept, does not accommodate different degrees. The question whether a piece of evidence is testimonial must be answered "yes or no," rather than "more or less." For this reason, the Court confirmed that the act of production rightfully sought by the government in *Fisher* was testimonial in the same way that "being forced to surrender the key to a strongbox"¹⁵¹ is tantamount to being forced to say "this is the strongbox's key." Acknowledgment of this testimonial property does not, however, end the story. Following the logic of the *Fisher* and *Hubbell* Courts, *Fisher's* act of production was only trivially testimonial, and therefore unprotected by the privilege against self-incrimination, because the subpoenaed documents were known to exist. The act of production elicited from Hubbell, however, was nontrivially testimonial and therefore protected by privilege and "use immunity."

What criterion should courts use to distinguish between trivially and nontrivially testimonial acts of document production? The *Hubbell* decision supplies the necessary criterion: in *Hubbell*, the government relied on the *truthtelling* of the person forced to produce subpoenaed documents, but in *Fisher*, it did not.¹⁵² In other words, the person's ability to choose between truth and falsehood distinguishes

¹⁴⁹ *Hubbell*, 120 S. Ct. at 2046-48 (emphasis added) (footnote omitted).

¹⁵⁰ *Id.* at 2048.

¹⁵¹ *Id.* at 2047.

¹⁵² *Id.*

the two cases and delineates the boundaries between the protected and the unprotected acts of production.

The truth-telling criterion is consistent with our anti-pooling rationale for the privilege. According to our rationale, a suspect's ability to tell uncontradicted lies can impose externalities because guilty suspects might harm innocent suspects by pooling with them through fabrications, lies, or omissions. Thus, guilty suspects in Hubbell's position can fabricate the assembly of subpoenaed documents, which would inevitably reduce the credibility of document assembly conducted by their innocent counterparts. Immunizing the act of production in *Fisher* was unnecessary because the ability to tell uncontradicted lies did not exist.¹⁵³

Applied to the compelled production of documents and samples, our anti-pooling rationale imposes order on self-incrimination doctrine. Under this approach, evidence known to exist at the time of its compelled production would not be testimonial. Thus, the privilege against self-incrimination would not extend to a suspect's refusal to provide incriminating evidence by participating in a lineup or by providing bodily samples. The privilege would also afford no protection to a suspect required, for example, to take a breathalyzer test. If a guilty suspect agrees to undergo a breathalyzer examination, she would be separated from innocent suspects because the breathalyzer cannot lie. If guilty suspects cannot fabricate evidence in a way that harms the innocent, then they should not be exempted from potential self-incrimination. Only the existence of a meaningful fabrication alternative should therefore activate the privilege. If a person ordered to produce an existing document, a sample, or other physical evidence has such an alternative, then the privilege should protect her act of production. Otherwise, the privilege should be set aside.

In some respects, this approach parallels the Supreme Court's distinction between testimonial and physical evidence. Our rationale, however, is not merely semantic; it derives from the consequences of the compelled act of production. These consequences, which must have affected the Court's jurisprudence in this area, explain the acknowledged breakdown of the official distinction. Our approach therefore better accounts for this jurisprudence.¹⁵⁴

¹⁵³ In *Fisher*, the taxpayer could not have forged the subpoenaed documents prior to their production and was not required to vouch for their authenticity. *Fisher*, 425 U.S. at 413. Forgery is more easily uncovered and thus more risky than selective production of previously unknown documents (an equivalent of perjury). In addition, forgery increases the chance that the document will appear suspicious, differentiating it from unsuspecting-looking documents surrendered by innocent suspects. Large-scale pooling of forged and authentic documents therefore seems unlikely.

¹⁵⁴ A possible critique of our rationale for the privilege is that, even in the physical evidence context, one can still imagine a situation in which, analogous to the lying-alternative settings, an evidentiary ambiguity reminiscent of pooling might occur. The argument can be made as follows: if

physical evidence sought from a suspect is ambiguous, then both innocent and guilty suspects would prefer to provide it rather than to risk adverse inferences resulting from withholding the evidence. As adverse inferences are plainly damaging to a guilty suspect, she might prefer to relinquish physical evidence when she is unaware of its contents, especially if the evidence is more likely to be ambiguous than incriminating.

Judge Posner's recent formulation provides a helpful model: $p = p_1x_1 + (1-t)p_2 + tp_3x_2$. In this formulation, p is the overall probability that the suspect will be found guilty, as determined by the sum of the three probabilities mentioned below: p_1 is the probability of guilt generated by already existing evidence x_1 ; p_2 is the probability of guilt inferred from the suspect's refusal to relinquish physical evidence x_2 ; p_3 is the probability of guilt derived from that evidence (x_2); and t is the suspect's decision whether to relinquish the evidence (t equals 0 if the suspect does not relinquish the evidence, and t equals 1 if he does). See Posner, *supra* note 62, at 1535. If the suspect relinquishes the evidence, the probability of his conviction would equal $p_1x_1 + p_3x_2$. If he refuses to relinquish it, then the probability of his conviction would equal $p_1x_1 + p_2$. The suspect's decision whether to relinquish the evidence would therefore crucially depend on the difference between p_3x_2 and p_2 : if $p_3x_2 > p_2$, the suspect would withhold the evidence; if $p_3x_2 < p_2$, the suspect would relinquish it; and if $p_3x_2 = p_2$, the suspect would be indifferent as between withholding or relinquishing the evidence. It would thus be rational for a guilty suspect to release physical evidence rather than retain it whenever he expects the evidence to be ambiguous enough to pool him with innocent persons.

Our critics might argue that, when a suspect relinquishes ambiguous physical evidence, a jury could rationally convict the suspect on the basis of this evidence and might therefore wrongly convict an innocent defendant. This miscarriage of justice might not occur if the privilege were extended to physical-evidence settings. If so, this possibility would substantially reduce our rationale's capacity to distinguish between types of evidence to which the privilege should apply.

This line of critique is misdirected. From the anti-pooling viewpoint, ambiguous physical evidence differs crucially from false testimony. A guilty suspect's ability to imitate the innocent through testimony is incomparably better than her ability to pool with innocent persons with the help of ambiguous physical evidence. A person has no control over physical evidence, and as the saying goes, "[c]ircumstances cannot lie." ALEXANDER WELSH, *STRONG REPRESENTATIONS: NARRATIVE AND CIRCUMSTANTIAL EVIDENCE IN ENGLAND* 24 (1992) (internal quotation marks omitted). By contrast, because a person can control his words or handwriting sample, a guilty suspect can pool with innocent suspects.

This analysis suggests that physical evidence sought from a suspect need not be protected by the self-incrimination privilege even when the evidence's probative capacity is uncertain *ex ante*: in other words, when it may turn out to be either probative or ambiguous. Such evidence might be useful, and the ambiguity risk associated with its extraction and use is relatively insignificant: when physical evidence turns out to be ambiguous and is thus incapable of distinguishing between the guilty and the innocent, the evidence does not affect the probability of accounts given by innocent suspects.

This point can be made more vividly with the help of Bayes' Rule, under which:

$P(G)$ = the prior probability of a suspect's guilt, derived from the evidence gathered by the police at initial investigation stages and after considering the account given by the suspect.

$P(E)$ = the general probability of finding physical evidence (E) similar to that extracted from the suspect; that is, the probability of finding such evidence in cases of guilt and innocence alike. This probability equals the probability of finding evidence, given either guilt or innocence: $P(E|G) + P(E|not G)$.

$P(E|G)$ = the probability of finding such evidence when the suspect actually committed the crime (probability of evidence, given guilt).

$P(G|E)$ = the probability that the suspect is guilty as charged, given the finding of the above evidence.

Bayes' Rule is based on the ordinary multiplication rule for conjunctive events:

$$P(G \& E) = P(G|E) \times P(E);$$

$$P(E \& G) = P(E|G) \times P(G);$$

$$P(G|E) \times P(E) = P(E|G) \times P(G); \text{ hence, } P(G|E) = P(G) \times P(E|G) / P(E).$$

B. *The Balsys Doctrine: The Same-Sovereign Limitation of the Privilege*

In *United States v. Balsys*,¹⁵⁵ the Supreme Court confined the privilege against self-incrimination to same-sovereign cases by holding that a suspect's concerns about prosecution in a foreign country do not activate Fifth Amendment protection.¹⁵⁶ For obvious reasons, this limitation is difficult to align with such traditional rationales for the privilege as privacy, free agency, and individualism. The dissenting opinion in *Balsys*, written by Justice Breyer, rightly emphasized this point.¹⁵⁷ Moreover, as the dissenting opinion noted,¹⁵⁸ the same-sovereign limitation seems inconsistent with the Court's holding in *Murphy v. Waterfront Commission*.¹⁵⁹ In *Murphy*, the Court decided that the privilege would apply when a witness in a state proceeding invokes it out of concern regarding a potential federal prosecution, and

In other words, the posterior probability of an event (the suspect is guilty as charged, given the evidence in question) equals the product of the prior probability of that event (the suspect is guilty as charged, regardless of that evidence) and the percentage of guilt cases in which evidence similar to the evidence in question was found in the total number of both guilt and no-guilt cases featuring such evidence. This ratio is the "relevancy quotient" signifying the probativeness of evidence *E*, that is, its capacity to change the prior probability. See, e.g., RICHARD JEFFREY, *PROBABILITY AND THE ART OF JUDGMENT* 109 (1992). The assumption that *E* is ambiguous implies, roughly, that the probability of finding such evidence in all types of cases equals the probability of finding it in cases of guilt: $P(E|G) = P(E)$. As the relevancy quotient equals 1, the posterior probability $P(G|E)$ remains unchanged. Hence, no innocent suspect can be harmed by the admission of *E*.

When the evidence sought from a suspect is known to be ambiguous, however, the imposition of a ban on drawing adverse inferences from the suspect's refusal to give that evidence away is justified. If such inferences were allowed, then both guilty and innocent suspects would provide evidence known to be ambiguous. Extracting and using such evidence would waste resources, so an evidentiary privilege akin to the right to silence should apply. In the domain of positive law, this privilege can be anchored to Federal Rule of Evidence 403 and its cost-benefit formula. Under this rule, evidence may be excluded when its probative value (the benefit) is substantially outweighed by the danger of unfair prejudice or of confusion of the issues or considerations of undue delay or waste of time (the costs). See *FED. R. EVID.* 403; Posner, *supra* note 62, at 1522-24. This residual rule of exclusion would therefore supplement the self-incrimination privilege, just as it supplements other admissibility rules. Note, however, that it would supplement the privilege by acting on the general cost-benefit analysis that involves no special harm to innocent suspects. By contrast, the self-incrimination privilege is based on a context-specific cost-benefit analysis in which this harm, or more precisely, its abatement, plays a central role. Under general Rule 403 analysis, a suspect's refusal to relinquish ambiguous physical evidence should normally be held inadmissible due to its inability to distinguish the guilty from the innocent. Adverse inferences prohibited by the self-incrimination privilege would have a positive function: they would prevent pooling and thus help to attain the desired separation. In the former case, adverse inferences would be banned for being unable to tackle the ambiguity and redundancy problems and for wasting resources. In the latter case, prohibition of adverse inferences would function as an important anti-pooling incentive.

¹⁵⁵ 524 U.S. 666 (1998).

¹⁵⁶ *Id.* at 689-700.

¹⁵⁷ *Id.* at 712-19 (Breyer, J., dissenting).

¹⁵⁸ *Id.* at 702-17.

¹⁵⁹ 378 U.S. 52 (1964).

vice versa.¹⁶⁰ The principle underlying *Murphy* also requires the privilege to apply when claimed by a witness in a state proceeding with regard to fear of prosecution in another state.¹⁶¹ The Court's decision in *Murphy* was grounded primarily on the traditional rationales for the privilege. If carried to its logical conclusion, this decision would therefore support the dissenting opinion in *Balsys*.¹⁶²

The anti-pooling rationale for the privilege against self-incrimination resolves these difficulties and justifies the same-sovereign limitation. The *Balsys* constraint produces no pooling *within the American legal system* and therefore imposes no risk of wrongful conviction on innocent defendants who are tried domestically. Thus, if a person in *Balsys*'s position chooses to lie, his lies would affect the innocents tried in Lithuania (a country where *Balsys* could be prosecuted)¹⁶³ but not in the United States. The same-sovereign limitation of the privilege therefore efficiently generates probative evidence for proceedings taking place in the United States, such as the deportation proceedings conducted against *Balsys*.¹⁶⁴ As for the foreign innocents who might be affected by the pooling that might occur overseas, their own legal systems should take care of them.

We do not reach this conclusion for cynical or myopically nationalist reasons. We simply believe that each legal system should use evidentiary standards that accord with its own objectives and values. Any attempt to affect those objectives and values from outside would be both presumptuous and economically inefficient. As the *Balsys* Court acknowledged, an applicable international norm that provided for cooperative law enforcement between the United States and the foreign country might alter this conclusion.¹⁶⁵ An international norm that demanded uniform observance of the self-incrimination privilege would, presumably, have a similar result. However, absent such special relationships, the same-sovereign limitation to the privilege should remain intact.¹⁶⁶

¹⁶⁰ *Id.* at 79–80.

¹⁶¹ 1 MCCORMICK, *supra* note 12, § 123, at 447; *see also Balsys*, 524 U.S. at 671–72 (implying unequivocally that *Murphy* applies uniformly in the United States).

¹⁶² Indeed, as Chief Justice Burger remarked almost a decade and a half ago, an eventual extension of the privilege to foreign incrimination can be fairly implied from *Murphy*. *Araneta v. United States*, 478 U.S. 1301, 1304 (1986).

¹⁶³ *See Balsys*, 524 U.S. at 670. *Balsys*, a resident alien, was subpoenaed pursuant to deportation proceedings to testify regarding his activities during World War II, prior to his immigration to the United States. *Id.* *Balsys* claimed that his testimony could subject him to criminal prosecution in Lithuania, Israel, or Germany. *Id.*

¹⁶⁴ Note that these proceedings are not criminal. If they were criminal, the right to silence would apply domestically with full force.

¹⁶⁵ *Balsys*, 524 U.S. at 698–99.

¹⁶⁶ This point has a solid economic justification: when cooperation among countries with regard to their self-incrimination rules would be mutually beneficial, the countries should be able to bar-

This analysis justifies not only the confinement of the *Murphy* principle to the United States,¹⁶⁷ but also the extension of the principle nationwide. The need to reduce the extent of the pooling problem in American criminal proceedings justifies the extension. This reduction in pooling would, in turn, reduce the risk of erroneous conviction of American defendants. Cooperation between federal and state courts in this endeavor is not only natural, but also efficient.¹⁶⁸

C. *The Baxter Principle: Adverse Inferences in Noncriminal Proceedings*

In a noncriminal federal proceeding, such as a civil trial or an administrative hearing, a defendant may only invoke the self-incrimination privilege as a contempt exemption and may not claim the privilege against adverse inferences. In *Baxter v. Palmigiano*,¹⁶⁹ the Court held that the Fifth Amendment did not forbid "adverse inferences against parties to civil actions when they refuse to testify in response to probative evidence offered against them."¹⁷⁰ This constitutional license, known as the *Baxter* principle, has been applied widely, with the repeated blessing of the circuit courts of appeals.¹⁷¹ The *Bax-*

gain successfully. Bargaining in this area does not involve substantial transaction costs. Moreover, because any country can unilaterally protect its innocents from pooling by introducing appropriate provisions into its evidence law, no harmful externalities are involved. These translucent factors almost eliminate countries' incentives for strategic behavior. Therefore, countries will cooperate by agreement when it is mutually beneficial: a familiar Coasean trade will likely take place. See generally RICHARD A. POSNER, *ECONOMIC ANALYSIS OF LAW* 8-9 (5th ed. 1998) (explaining the Coase theorem). Absent such an agreement, one can safely infer that cooperation between the countries would be economically inefficient. Cf. Eyal Benvenisti, *Collective Action in the Utilization of Shared Freshwater: The Challenges of International Water Resources Law*, 90 AM. J. INT'L L. 384 (1996) (pioneering the application of this economic methodology to public international law problems).

¹⁶⁷ For a recent decision based on the *Balsys* principle, see *In Re Impounded*, 178 F.3d 150, 155-56 (3d Cir. 1999), which discussed what proof witnesses who assert the privilege might have to offer if a cooperative law enforcement effort were found to enable a claim under the Fifth Amendment.

¹⁶⁸ There is an obvious economic difference between the interaction of sovereign states and the relationship between state and federal courts. Sovereign relations require that each state agree to all terms of the relationship (and the Coase theorem states that the bargained outcome is efficient, net of transaction costs). By contrast, the Constitution gives the Supreme Court a dominant role in defining the relations between state and federal courts. We would therefore expect the Court's decisions to implement an efficient relationship between the two levels. Also, the Court is best situated for implementing nationwide criminal law policies. See POSNER, *supra* note 166, at 696-98.

¹⁶⁹ 425 U.S. 308 (1976) (allowing the factfinder to draw an adverse inference against a non-testifying inmate in a prison disciplinary proceeding).

¹⁷⁰ *Id.* at 318.

¹⁷¹ See, e.g., *LiButti v. United States*, 107 F.3d 110, 124 (2d Cir. 1997); *FDIC v. Fid. & Deposit Co. of Md.*, 45 F.3d 969, 977 (5th Cir. 1995); *Koester v. Am. Republic Invs., Inc.*, 11 F.3d 818, 823-24 (8th Cir. 1993); *Daniels v. Pipefitters' Ass'n Local Union No. 597*, 983 F.2d 800, 802 (7th Cir. 1993); *RAD Servs., Inc. v. Aetna Cas. & Sur. Co.*, 808 F.2d 271, 274-75, 277 (3d Cir. 1986); *Brink's Inc. v. City of New York*, 717 F.2d 700, 709 (2d Cir. 1983); *Hoover v. Knight*, 678 F.2d 578, 581-82

ter principle reflects the prevailing view in federal and state law, although there are a few states that refuse to apply it.¹⁷²

The *Baxter* principle is also difficult to reconcile with the traditional rationales for the privilege. For obvious reasons, the principle appears to be at odds with the privacy and the free agency rationales. In civil litigation — but certainly not in administrative hearings, such as prison disciplinary proceedings — the *Baxter* principle's clash with the individualism rationale is less apparent. Arguably, as long as the individual benefits from the contempt exemption, revocation of the privilege in a civil trial does not amount to an impermissible state-biased transgression into the state-individual balance of power. However, the *Baxter* principle is only facially consistent with this rationale: civil revocation of the evidentiary privilege in the form of a judicial (or juridical) license to draw adverse inferences is a legal rule that comes from the state. The resulting compulsion of the Fifth Amendment privilege-holder is, therefore, attributable to the state.

The anti-pooling rationale, which justifies the privilege as a mechanism for preventing wrongful convictions, provides a more straightforward explanation for *Baxter*: the self-incrimination privilege is irrelevant in civil proceedings; civil proceedings do not involve innocents who face possible wrongful conviction as a result of pooling. Consequently, the harm that the privilege seeks to prevent does not exist in civil and other noncriminal proceedings. To be sure, revocation

(5th Cir. 1982); *United States v. White*, 589 F.2d 1283, 1286–87 (5th Cir. 1979); see also *Nat'l Acceptance Co. of Am. v. Bathalter*, 705 F.2d 924, 929–32 (7th Cir. 1983) (“After *Baxter* there is no longer any doubt that at trial a civil defendant’s silence may be used against him, even if that silence is an exercise of his constitutional privilege against self-incrimination.”). For a summary of the controlling principle, see *Lasalle Bank Lake View v. Seguban*, 54 F.3d 387, 389–92 (7th Cir. 1995), which held that, although the circuit courts of appeals have widely recognized the rule allowing the factfinder to draw adverse inferences from Fifth Amendment silence in civil proceedings, even in a civil case a summary judgment imposing liability cannot rest solely on an assertion of the privilege, *id.* at 394. See also *SEC v. Colello*, 139 F.3d 674, 677–78 (9th Cir. 1998) (affirming summary judgment against a defendant when there was some evidence in addition to an adverse inference from silence); *U.S. Election Corp. v. Microvote Corp.*, No. 94-2532, 1995 U.S. App. LEXIS 7918, at *13–*14 (7th Cir. Apr. 7, 1995) (stating that an adverse inference may be drawn from a civil defendant’s silence at trial), *reh’g denied*, 1995 U.S. App. LEXIS 21687 (7th Cir. Aug. 11, 1995). The *Baxter* principle also applies in clemency proceedings. See, e.g., *Ohio Adult Parole Auth. v. Woodard*, 523 U.S. 272, 285–88 (1998).

¹⁷² The *Baxter* principle does not apply in states that have adopted Uniform Rule of Evidence 512 (an equivalent of the proposed Federal Rule of Evidence 513, so far rejected by Congress). Uniform Rule 512 provides that no adverse inferences may be drawn from an invocation of a legally recognized privilege. Some states, such as Alaska, Texas, Wisconsin, and (seemingly) Maine, have adopted provisions that allow a civil defendant’s Fifth Amendment silence to be used as evidence against him. See MUELLER & KIRKPATRICK, *supra* note 54, at 356–57 & nn.7 & 10. For discussions of these issues, see Deborah Stavile Bartel, *Drawing Negative Inferences upon a Claim of the Attorney-Client Privilege*, 60 BROOK. L. REV. 1355 (1995); Robert Heidt, *The Conjuror’s Circle — The Fifth Amendment Privilege in Civil Cases*, 91 YALE L.J. 1062 (1982); and John H. Mansfield, *Evidential Use of Litigation Activity of the Parties*, 43 SYRACUSE L. REV. 695, 740–45 (1992).

of the privilege in noncriminal settings may generate a noncriminal type of pooling. In devising a rule that either removes or retains the privilege against adverse inferences, this factor should count as harm. But this type of pooling and the corresponding increase in the incidence of error are less harmful than the conviction of an innocent person.

Civil and criminal cases should, and indeed do, treat the risk of error differently. Evidentiary policies for civil litigation are commonly grounded on the equality-of-error principle, which deems "false positives" and "false negatives" to be equal: wrongful loss of the defendant's dollar is as regrettable as wrongful loss of the plaintiff's dollar.¹⁷³ The preponderance-of-the-evidence requirement, which is generally endorsed as the controlling standard of proof in civil litigation, reflects the equality-of-error principle. Standing alone, however, that requirement would fail to maintain the principle, were it not accompanied by the relatively evenhanded system of rules that governs the admission and exclusion of evidence. Under this system of rules, the exclusion of evidence cannot be biased in favor of one party at the expense of her opponent. "Evidence," said Bentham, "is the basis of justice: exclude evidence, you exclude justice."¹⁷⁴ As a purportedly universal proposition, this statement is, of course, remarkably overstated.¹⁷⁵ However, its core wisdom is true: if you exclude probative evidence tendered against one party, you necessarily impose the risk of error on the other party, and if you have no justification for that imposition of risk, you must admit the evidence rather than exclude it.¹⁷⁶ Avoiding the risk of error might justify the exclusion of evidence, but the avoided risk must be demonstrably greater than the risk imposed.

In a system of civil litigation governed by the equality-of-error principle, this situation would rarely occur.¹⁷⁷ The assumption that the two potential errors are equally harmful must shift the focus of the admissibility analysis to the errors' respective probabilities: the error more likely to spoil the verdict is the one that must be avoided at the price of exposure to the other possible error. Hence, if an error is more likely to occur when an item of evidence is admitted than when it is excluded, that item should be excluded; if the opposite is the case, it should be admitted; and if the probabilities of the two types of error are equal, exclusion of the item would seem to be the best policy in view of the costs incurred to process the item through litigation.

¹⁷³ See Stein, *supra* note 80, at 333-42. For a recent economic analysis, see Posner, *supra* note 62, at 1504-07.

¹⁷⁴ 5 BENTHAM, *supra* note 8, at 1.

¹⁷⁵ See TWINING, *supra* note 8, at 69-75; Stein, *supra* note 80, at 296-322.

¹⁷⁶ See Stein, *supra* note 80, at 338.

¹⁷⁷ See *id.*

This admissibility analysis, like the cost-benefit analysis implied by Federal Rule of Evidence 403, can only be conducted on a case-by-case basis.¹⁷⁸ Adverse inferences from silence cannot therefore be banned in advance. Even the most ardent opponent of such inferences would not argue that their admission and use as evidence necessarily entail a greater probability of error than their exclusion. In fact, quite the opposite is the case: silence in the face of accusations is largely a reliable signal of guilt. Therefore, by consistently drawing adverse inferences from silence, triers of fact would reach more correct decisions than incorrect ones. The benefits to deserving parties would consequently offset the harms to litigants whose factual accounts appear less credible because of pooling. Thus, adverse inferences from silence should generally be permissible in civil trials, at least from an economic point of view.

Matters are markedly different in criminal adjudication, in which the difference between the two types of error is a constant value-based determinant, rather than a probability-dependent, case-specific factor. The wrongful conviction of an innocent defendant (a "false positive") is much costlier than the wrongful acquittal of a criminal (a "false negative").¹⁷⁹ Therefore, in contrast to civil case errors, a reduction in criminal false negatives cannot offset false positives.¹⁸⁰

Our justification of the *Baxter* principle faces a seemingly powerful objection. Fearful of adverse inferences, a defendant in a civil case might decide to testify. If the defendant were actually guilty, she would testify untruthfully. The higher the stakes, the more she would prefer false testimony over silence. Fearing impeachment at her subsequent criminal interrogation and trial, the defendant might then repeat her false testimony. Consequently, the *Baxter* principle might intensify the pooling problem in a criminal proceeding when the defendant decides to repeat her false civil testimony. Arguably, this possibility runs against our rationalization of the *Baxter* principle.

This objection has an undeniable superficial appeal but ultimately fails. Under the *Baxter* principle, as developed by federal courts, civil liability cannot rest solely on adverse inferences drawn from the defendant's Fifth Amendment silence. Adverse inferences do not consti-

¹⁷⁸ See, e.g., *United States v. Layton*, 767 F.2d 549, 554 (9th Cir. 1985) (noting that considerations that arise under Rule 403 are susceptible only to case-by-case determinations).

¹⁷⁹ See Posner, *supra* note 62, at 1504-07; see also Stein, *supra* note 80, at 322-42.

¹⁸⁰ Ultimately, of course, any such tradeoff depends on one's values, and one might imagine a criminal justice system in which the two types of errors are treated as equally harmful. In states of emergency, when the rate of criminality is unbearably high, this scenario may not be a mere theoretical possibility. See ROBERT NOZICK, *ANARCHY, STATE, AND UTOPIA* 96-101 (1974) (examining the issue from a perspective that rejects thoroughgoing utilitarianism and thus leads to a conclusion favorable to defendants); Wertheimer, *supra* note 108, at 59-64 (criticizing the assumption that it is never justified to permit the innocent to be punished).

tute independent evidence; they can merely corroborate other evidence that already implicates the defendant.¹⁸¹ Under the rules of civil discovery, this other evidence must be known to a guilty defendant when she decides whether to testify at her civil trial. When the stakes are high, the defendant exercises her discovery rights to their fullest extent. If she found the plaintiff's evidence weak, she would remain silent. If she found this evidence overwhelmingly strong, she would also remain silent to avoid undermining her chances of acquittal in the subsequent criminal proceeding. If she found that the plaintiff's evidence is of intermediate strength, her decision would fluctuate between silence and perjury. Furthermore, the criminal pooling problem would intensify only in cases in which the defendant opted for perjury and subsequently repeated her perjurious testimony at her criminal proceeding. This circumstance would arise only in the fraction of cases in which the defendant's civil perjury both was promising *ex ante* and proved successful *ex post*. One must subtract those cases in which the defendant had good reasons to believe that her self-exonerating lies would go unimpeached in both civil and criminal proceedings from the category of cases in which the defendant lied in both civil and criminal proceedings. In cases in which lies were thought to be unimpeachable, the criminal pooling problem would already be present, and thus the attendant miscarriages of justice would not be attributable to the *Baxter* principle. Therefore, this principle's effect on pooling in criminal proceedings is insignificant.¹⁸²

D. *The Jenkins-Fletcher Doctrine: Permitting Adverse Inferences from Pre-Arrest Silence*

In two landmark decisions, *Jenkins v. Anderson*¹⁸³ and *Fletcher v. Weir*,¹⁸⁴ the Supreme Court held that there are circumstances in which adverse inferences may be drawn from a defendant's silence prior to her arrest and *Miranda* warnings. Such inferences are appropriate when a defendant had an adequate opportunity to report her exonerating story to the police but did not do so. These inferences are permissible for impeachment purposes in a criminal trial if a defendant takes the stand and testifies to her innocence.¹⁸⁵

¹⁸¹ SEC v. Colello, 139 F.3d 674, 678 (9th Cir. 1998); *Lasalle Bank Lake View v. Seguban*, 54 F.3d 387, 390 (7th Cir. 1995).

¹⁸² This effect would be further offset by the civil cases that guilty defendants would lose after resorting to perjurious testimony. At least some of those defendants would then conclude, contrary to their previous expectations, that their lies do not work and can even backfire.

¹⁸³ 447 U.S. 231 (1980).

¹⁸⁴ 455 U.S. 603 (1982).

¹⁸⁵ *Fletcher*, 455 U.S. at 606-07; *Jenkins*, 447 U.S. at 238.

The *Jenkins-Fletcher* doctrine aligns with the free agency rationale for the self-incrimination privilege; the defendant experienced no compulsion on the part of the government when she decided to remain silent. The other traditional rationales for the privilege, individualism and privacy, are too vague either to justify or to critique the doctrine. The *Jenkins-Fletcher* doctrine is markedly easier to explain using the anti-pooling rationale. First, the *Jenkins-Fletcher* doctrine allows adverse inferences from silence to impeach a testifying defendant. This purpose is anti-pooling in nature; a defendant who decides to withhold her exonerating story prior to trial but testifies to her innocence in court rightfully appears suspicious. If such a defendant is innocent, then she must come forward at her trial with a convincing explanation of her prior withholding of the story. If she offers such an explanation, then she can protect herself from adverse inferences. However, if the defendant is guilty and has no satisfactory explanation, she risks impeachment. Thus, the *Jenkins-Fletcher* doctrine motivates guilty defendants not to testify falsely in their defense, thus preserving the integrity of the pool of innocent defendants.

More importantly, the doctrine only allows silence to impeach a testifying defendant under conditions similar to *res gestae*. Under *Jenkins-Fletcher* circumstances, the defendant's silence is typically a product of a spontaneous decision made in the absence of a viable lying alternative. In non-spontaneous situations, the self-incrimination privilege is necessary as an incentive for guilty suspects to separate themselves from innocent ones through silence. In spontaneous circumstances, by contrast, in which a shortage of time and other pressures curtail the suspect's ability to fabricate a self-exonerating account, the right to silence serves no useful purpose. In other words, the abolition of the *Jenkins-Fletcher* doctrine would not affect a criminal's behavior in spontaneous circumstances, and the doctrine does not therefore intensify the pooling problem. In cases in which *Jenkins-Fletcher* applies, loss of evidence attendant on full recognition of the right to silence would be unacceptable.

E. The Griffin Doctrine: Prohibiting Adverse Inferences from a Defendant's Refusal to Testify in Court

Under *Griffin v. California*,¹⁸⁶ adverse inferences may not be drawn from a defendant's choice not to testify in her defense.¹⁸⁷ A defendant's failure to testify in her defense can be valuable evidence of guilt; therefore, loss of that evidence must be justifiable. Recently, the

¹⁸⁶ 380 U.S. 609 (1965).

¹⁸⁷ *Id.* at 614-15.

four dissenting Justices in *Mitchell v. United States*¹⁸⁸ questioned *Griffin*'s holding, contending that nothing justifies this loss of potentially valuable evidence.¹⁸⁹ In such countries as England and Israel, an accused may refuse to testify in her defense, but the prosecution may comment on her failure to testify, and courts are generally allowed to draw adverse inferences from that silence.¹⁹⁰ Adverse inferences against a nontestifying defendant have also received some support in the academic literature.¹⁹¹ As noted, the traditional rationales for the self-incrimination privilege do not adequately explain the *Griffin* doctrine (as opposed to the contempt exemption). This problem casts doubt on the doctrine's desirability.

However, the anti-pooling rationale demonstrates that the *Griffin* doctrine is in fact justified. Our main justification of *Griffin* rests on arguments similar to the ones we set forth in Part III in support of *Doyle*. The revocation of the privilege against adverse inferences would force more defendants to lie, and pooling would occur because both guilty and innocent defendants alike would prefer to take the stand (with a few exceptions). As a result, the plausibility of accounts given by innocent defendants would be reduced, and innocents would face an increased risk of conviction.¹⁹²

¹⁸⁸ 526 U.S. 314 (1999).

¹⁸⁹ See *id.* at 331-41 (Scalia, J., dissenting); *id.* at 341-43 (Thomas, J., dissenting).

¹⁹⁰ Criminal Justice and Public Order Act, 1994, c. 33, § 37 (Eng.); Criminal Procedure Law (Consolidated Version), 1982, § 162, 36 L.S.I. 65, (1981-82) (Isr.). For a discussion of the English law, see MCEWAN, *supra* note 79, at 179-82. For a broader comparative study, see Gordon Van Kessel, *European Perspectives on the Accused as a Source of Testimonial Evidence*, 100 W. VA. L. REV. 799 (1998). One might argue that American jurors draw adverse inferences regardless of *Griffin* and of any instruction given on its basis. According to the Supreme Court, however, "[i]t is reasonable enough to expect a jury to comply with that instruction since, as we observed in *Griffin*, the inference of guilt from silence is not always 'natural or irresistible.'" *Portuondo v. Agard*, 120 S. Ct. 1119, 1124 (2000) (quoting *Griffin*, 380 U.S. at 615). Our Article proceeds on this doctrinal assumption, which we believe to be correct. Indeed, if jurors habitually disregarded *Griffin*, we would then witness virtually no defendants who decide not to testify in their defense.

¹⁹¹ See Posner, *supra* note 62, at 1533-35; see also Stein, *supra* note 80, at 323-32 (supporting the introduction of similar inferences, provided that the whole body of the criminal evidence law is reformed in tune with the principle of "Maximal Inferential Individualization").

¹⁹² This argument is related to Professor William Stuntz's claim that, absent the privilege, the law would have to recognize an excusatory defense, akin to either duress or necessity, that would be available to a guilty defendant compelled to testify and perjure herself. See Stuntz, *Self-Incrimination*, *supra* note 12, at 1252-56. The resulting "privilege to lie" would make innocent defendants worse off; if the jury knew that perjury would not be punished, then it would place less faith in any defendant's testimony, including the testimony of innocent defendants. In our view, the abolition of the right to silence would result in the pooling of innocent and guilty defendants either with or without a "privilege to lie." If all defendants took the stand, then guilty defendants would attempt to pool with innocent defendants by imitating the latter group's testimonial accounts. In contrast to Professor Stuntz, we therefore argue that pooling would result not from the jury's treatment of the "privilege to lie" as a credibility-reducing factor (as this problem is rectifiable); rather, it would result from the successful imitation of innocents by criminals.

Arguably, our justification of *Griffin* is weaker than our parallel justification of *Doyle*: an indicted defendant is generally aware of the evidence that she will face at trial and decides whether to testify when the prosecution has already presented its case-in-chief. Therefore, a guilty defendant would seek refuge in lies, rather than in silence, whenever the prosecution could not refute her lies easily. An interrogated suspect has no such option because she is largely unaware of the evidence thus far gathered by the police, and she does not know what evidence against her the police might obtain in the future. Hence, the right to silence, in the form of an evidentiary privilege against adverse inferences, would be considerably more successful in diverting suspects from lying during custodial interrogation than in diverting defendants from perjuringly testifying at trial.

There are two lines of defense against this critique. First, a suspect who confesses and subsequently pleads guilty is likely to receive a lesser sentence than a defendant who switches to a guilty plea during trial.¹⁹³ Consequently, there is less of an incentive for a defendant to change her plea after hearing the prosecution's evidence; under *Griffin*, she would prefer either silence or lies. By removing the option to remain silent, the legal system would therefore encourage defendants to lie. Admittedly, this line of defense would not hold if the premium for true confessions were at a level high enough to induce criminals to confess and plead guilty. Under these conditions, guilty defendants would then voluntarily separate themselves from innocents by confessing to the crimes they committed. These confessions, however, would come at a high cost; therefore, the right to silence could still serve as a socially cheaper device for attaining the desired separation.

Second, the prosecution's rebuttal opportunity offsets the difference between a suspect's and an indicted defendant's incentives to lie. As rebuttal evidence is not subject to pretrial disclosure,¹⁹⁴ a guilty defen-

In our view, the law would properly achieve the required separation by allowing criminals to opt for silence costlessly or cheaply instead of testifying. Unlike Professor Stuntz, we find it hard to believe in the deterrent capacity of perjury penalties; even if the latter could be effectively implemented, such penalties would still be less severe than the punishment for the underlying substantive crime. Furthermore, we disagree with Professor Stuntz's contention that defendants who commit perjury should be exempted from those penalties. See *supra* note 79; see also Schulhofer, *supra* note 12, at 322-23 (arguing that penalties for perjury would not deter guilty defendants from perjuringly testifying in their defense). Additionally, we reject Professor Stuntz's assertion that perjury per se is economically detrimental to the legal system. If guilty defendants' false testimonial accounts did not affect innocent defendants, then we would say that perjury is socially worse than confession. Perjury, however, could be better than silence because its proof establishes guilt more easily than does silence.

¹⁹³ See U.S. SENTENCING GUIDELINES MANUAL § 3E1.1 (1998).

¹⁹⁴ FED. R. CRIM. P. 16(a) (limiting disclosure of prosecution materials, except certain records of the defendant's own statements, to evidence to be presented during its case-in-chief and to information material to defense preparation); *United States v. Delia*, 944 F.2d 1010, 1018 (2d Cir. 1991)

dant contemplating perjury will be uncertain of the nature of such evidence. Therefore, she may decide not to risk rebuttal and instead to opt for silence. Her decision will depend on the ex ante probability of rebuttal. This decision parallels a guilty suspect's choice between silence and lies during interrogation. Hence, our model applies to this decision as well, though not always with the same force.

Another offsetting factor is the rational conjecture that a jury will take more notice of a defendant's poor performance on the stand than at the police station. A jury directly observes the defendant's demeanor during cross-examination, whereas her demeanor at interrogation is largely inadmissible as evidence in court¹⁹⁵ and is easily attributable to factors such as fear and anxiety. Poor trial performance is therefore much riskier for defendants than poor performance during interrogation.¹⁹⁶ Because a guilty defendant runs the risk of performing poorly at trial, she would often be better off sheltering herself with silence. In the absence of the right to silence, a guilty defendant would have no choice but to imitate an innocent defendant by lying.

Griffin also affects a guilty suspect's choice between silence and lies at *interrogation*. To understand this point, suppose that the *Griffin* privilege did not exist, so that the *Doyle* privilege and the contempt exemption exhausted the right to silence. Knowing that she would have to testify at trial, a guilty suspect would find it hard to remain silent at interrogation. Her silence would immediately mark her as a likely offender, which would impel the police to focus their investigation on her. A suspect would instead elect to develop perjurious testimony for her subsequent trial. In anticipation of a false defense, the police and the prosecution would invest effort to secure rebuttal evidence. The suspect would therefore also consider making a false self-

(holding that rebuttal evidence is a recognized exception to pretrial disclosure requirements); *United States v. DiCarlantonio*, 870 F.2d 1058, 1063 (6th Cir. 1989) (same); *United States v. Windham*, 489 F.2d 1389, 1392 (5th Cir. 1974) (same).

¹⁹⁵ See, e.g., *State v. Welch*, 490 N.W.2d 216, 220 (Neb. 1992) (holding inadmissible opinion testimony about a defendant's demeanor at interrogation, which included "lack of eye contact," "lint picking, crossed-arm posture, evasion, and jumping to a different topic."). *But see State v. Lambert*, 460 S.E.2d 123, 131-32 (N.C. 1995) (upholding the admissibility of opinion evidence about a defendant's demeanor at the scene of the crime). See generally Olin Guy Wellborn III, *Demeanor*, 76 CORNELL L. REV. 1075, 1078-91 (1991) (arguing that defendants' demeanors often mislead juries rather than enlighten them).

¹⁹⁶ Even innocent defendants may face this risk, a fact that some commentators use to justify the right to silence. See Schulhofer, *supra* note 12, at 330-33; see also Susan Easton, *Legal Advice, Common Sense and the Right to Silence*, 2 INT'L J. EVIDENCE & PROOF 109, 114 (1998) (arguing that silence may be motivated by "fear, anxiety, confusion, the desire to protect someone else, embarrassment, outrage and anger" and that therefore juries cannot easily distinguish between silent innocents and silent criminals). In our view, the revocation of the right to silence can only strengthen the desire to testify for those few innocents who would prefer exercising this right to testifying under the present regime. We therefore find Professor Schulhofer's and Professor Easton's justifications of the right unconvincing.

exonerating statement to the police. However, because the police might discover her lies as the investigation proceeded, her choice would be difficult.

In the absence of *Griffin*, a guilty suspect's ultimate choice between lies and silence at interrogation would depend on two probabilities: the probability that her lies will be refuted at interrogation (RI) and the probability that they will be rebutted at trial (RT). If $RT > RI$, then the interrogated suspect would opt for lies. Alternatively, if $RI > RT$, the suspect would remain silent. Finally, if $RI = RT$, she would be indifferent between lies and silence.

The suspect's choice in the first situation, in which $RT > RI$, is most important for the present discussion. If RT and RI are both non-negligible probabilities and both trial and interrogation lies are perilous to the suspect, why should the suspect lie during her interrogation when she can still remain silent? The answer to this question relates to the overlap between the suspect's interrogation and trial lies and the consequent overlap between her interrogation and trial risks. Bound to testify at trial, the suspect would not risk impeachment by her pre-trial statement. Therefore, she would either use her Fifth Amendment privilege at her interrogation or stick to a single perjurious story that she thinks would exonerate her. If, on the one hand, she decides to remain silent, she would almost certainly be tried and thus face a serious risk. If, on the other hand, she opts for lies at her interrogation, she may divert suspicion to another suspect and thus avoid the trial altogether. At this stage, the worst that can happen to the suspect is that the police discover her lies. In this case, it would mean that those lies would not have withstood their more probable rebuttal at trial; hence there is no substantial worsening of the suspect's position.

This scenario might even give the suspect an opportunity to seek shelter in a different trial tactic. At trial, the suspect might produce better exonerating testimony and try to explain away her lies at the police station by claiming confusion, intimidation, and the like. This opportunity would not be available to the suspect if her lies are discovered during her trial testimony. Alternatively, if the police fail to refute the suspect's exonerating statement and her case goes to trial, then, in appropriate circumstances, the suspect would be able to use the statement to bolster the credibility of her trial testimony.¹⁹⁷

With *Griffin*, a suspect in the first situation, in which $RT > RI$ and both RT and RI are relatively substantial probabilities, would often

¹⁹⁷ See FED. R. EVID. 801(d)(1)(B); *Tome v. United States*, 513 U.S. 150, 156-67 (1995) (interpreting the hearsay exception of Federal Rule of Evidence 801(d)(1)(B) to apply only to out-of-court statements made before the alleged fabrication, motive, or influence); see also RONALD J. ALLEN, RICHARD B. KUHN & ELEANOR SWIFT, EVIDENCE: TEXT, CASES, AND PROBLEMS 460-62 (2d ed. 1997) (discussing interpretations and illustrations of Rule 801(d)(1)(B)).

choose silence over lies. As the suspect has no obligation to testify at trial, there is no risk that she *necessarily* must assume. When RT and RI are insignificant, the suspect's best option would be to lie, but a suspect would resort to this option with or without *Griffin*. The second situation ($RI > RT$) is irrelevant to our present comparison because a suspect would opt for silence at interrogation with or without *Griffin*. In the third situation ($RI = RT$), the suspect's choice would be similar to that in the first and would thus depend on the absolute strengths of RT and RI . Hence, the abolition of *Griffin* would force a fraction of previously silent guilty suspects to lie. These lies would result in a dangerous pooling of the guilty and the innocent.

The desirability of abolishing *Griffin* thus depends on the same cost-benefit calculus that applies to *Doyle*. The abolition of *Griffin* would produce obvious benefits in all three situations; it would force guilty suspects to plead guilty, to lie and to face rebuttal, or to risk adverse inferences from silence, thereby increasing the rate of correct convictions. The costs of eliminating *Griffin*, however, would undermine these benefits. The abolition of *Griffin* would intensify the pooling problem, increasing the rate of wrongful convictions. If the prevention of wrongful convictions is of immensely greater value to society than the prevention of wrongful acquittals, then the retention of the *Griffin* doctrine together with the *Doyle* doctrine would be the socially optimal choice.

An alternative justification of *Griffin* links the doctrine to the prior-conviction impeachment risk.¹⁹⁸ Facing that risk, innocent defendants with prior criminal records may decide not to testify in their own defense. Arguably, *Griffin* should protect such defendants.¹⁹⁹ This justification is premised on two highly questionable assumptions: that the jury will underestimate the proportion of nontestifying innocents or that the jury will underestimate the cost of wrongful convictions and misapply the reasonable doubt standard. There is, however, no reason to believe that either of those assumptions is correct. In a rational world, in which jurors properly determine the reasonable level of doubt,²⁰⁰ innocents with prior criminal records do not require *Griffin* protection. Imagine that a significant proportion of innocents do not testify because they fear impeachment by prior convictions. If the jury is aware of their motives for not testifying, then it would also not draw

¹⁹⁸ See FED. R. EVID. 609 (broadly allowing impeachment of testifying defendants with their prior convictions).

¹⁹⁹ See Bradley, *Griffin*, *supra* note 80, at 1294. This justification of *Griffin* has no impact on our model. Our model explains how the right to silence helps testifying innocents by inducing criminals to elect silence. Inducing more innocents to testify is beyond its ambition.

²⁰⁰ For a sustained argument that we do indeed live in such a world, see L. Jonathan Cohen, *Freedom of Proof*, in *FACTS IN LAW 1* (William Twining ed., 1983).

adverse inferences in the absence of *Griffin*. Moreover, even if the above assumptions held true, the appropriate remedy would not be the establishment of the *Griffin* right. Modification of the judge's instructions to the jury and of the criminal proof standard would do a far better job.

F. The Mitchell Doctrine: The Function of the Privilege in Sentencing Proceedings

In *Mitchell v. United States*,²⁰¹ Amanda Mitchell pleaded guilty to drug charges but contested the quantity of the drug (cocaine) involved in her offenses.²⁰² This quantity was crucial to her sentencing: Mitchell faced a mandatory minimum of one year in prison for distributing cocaine near a playground and a range of punishments for conspiring to distribute the drug. But if the prosecution could prove that the amount of cocaine was at least five kilograms, then the mandatory minimum would be ten years in prison.²⁰³ The trial judge advised Mitchell that the quantity of the drug would be determined at her sentencing hearing. At this hearing, three of Mitchell's co-defendants, who previously pleaded guilty and agreed to cooperate with the prosecution, testified against her.²⁰⁴ One of them told the court that Mitchell had sold different quantities of cocaine over a period of almost two years, placing her over the five-kilogram threshold; however, on cross-examination, he conceded that he had not seen Mitchell on a regular basis during this period.²⁰⁵ Mitchell, for her part, invoked the privilege against self-incrimination.²⁰⁶ The trial judge ruled that Mitchell did not retain this privilege after pleading guilty.²⁰⁷ Nevertheless, Mitchell decided to remain silent.²⁰⁸ In accord with his ruling, the trial judge held it against Mitchell that she "didn't come forward today and tell [the judge] that [she] really only did this a couple of times."²⁰⁹ The judge explicitly mentioned in his sentencing decision that "[o]ne of the things" that persuaded him to rely on her co-defendants' testimony was Mitchell's "not testifying to the contrary."²¹⁰ He sentenced Mitchell to ten years of imprisonment, and the Court of Appeals for the Third Circuit subsequently affirmed her sentence.²¹¹

²⁰¹ 526 U.S. 314 (1999).

²⁰² *Id.* at 317.

²⁰³ *Id.*

²⁰⁴ *Id.* at 318.

²⁰⁵ *Id.*

²⁰⁶ *See id.* at 319.

²⁰⁷ *Id.*

²⁰⁸ *See id.*

²⁰⁹ *Id.* (quoting Joint Appendix at 98, *Mitchell*, 526 U.S. 314 (1999) (No. 97-7541)).

²¹⁰ *Id.* (quoting Joint Appendix, *supra* note 209, at 95).

²¹¹ *Id.*

In a 5-4 decision, the Supreme Court held that these proceedings violated Mitchell's Fifth Amendment privilege against self-incrimination. The Court, in an opinion by Justice Kennedy, rejected the notion that incrimination is complete once guilt has been adjudicated and held both that the privilege applies to sentencing proceedings and that a defendant does not waive it by pleading guilty.²¹² The Court decided the case under *Griffin*, declaring that a sentencing court may not draw an adverse inference from a defendant's silence when it determines facts that relate to the circumstances of the crime.²¹³

The strength of the Court's opinion lies in the weakness of the distinction between the elemental and sentencing facts of a crime. Although federal and state legislatures have employed this distinction, it becomes arbitrary when applied to act-related, rather than actor-related, facts — that is, when it involves impersonal circumstances of the offense, rather than personal circumstances of the offender. In such cases, no special significance should attach to the fact that an aggravating factor appears in the sentencing rules, rather than in the statutory definition of the offense. Such formulations often stem from drafting convenience rather than from substantive concerns.²¹⁴ Given this fact and assuming that *Griffin* is unassailable as precedent, sheer logic necessitated the majority's outcome. Justice Kennedy explained:

Were we to accept the Government's position, prosecutors could indict without specifying the quantity of drugs involved, obtain a guilty plea, and then put the defendant on the stand at sentencing to fill in the drug quantity. The result would be to enlist the defendant as an instrument in his or her own condemnation, undermining the long tradition and vital

²¹² *Id.* at 325-26.

²¹³ *Id.* at 327-28. This decision was consistent with *Estelle v. Smith*, 451 U.S. 454, 462-63 (1981), a capital case that did not set a clear-cut precedent on the issue.

²¹⁴ These formulations have been used, quite improperly, but often successfully, as a means of escaping from the reasonable doubt standard with respect to what are only nominally "sentencing facts." See *McMillan v. Pennsylvania*, 477 U.S. 79, 85-86 (1986) (holding that the prosecution need not meet the beyond-a-reasonable-doubt standard in proving sentencing factors); *United States v. Shonubi*, 895 F. Supp. 460, 472 (E.D.N.Y. 1995) (suggesting that the preponderance-of-the-evidence standard applies to sentencing factors, although the seriousness of the sentence must be taken into account). But see *Apprendi v. New Jersey*, 120 S. Ct. 2348, 2362-63 (2000) (finding that statutory hate-crime enhancement of firearm possession and related offences was an element of these crimes, rather than just a sentencing factor, and therefore that the prosecution must establish it beyond all reasonable doubt); *Castillo v. United States*, 120 S. Ct. 2090, 2092 (2000) (holding that, although the relevant statute defined machine gun possession as a sentence-aggravating factor, it should be interpreted instead as a separate offense that the prosecution must prove beyond a reasonable doubt); *Jones v. United States*, 526 U.S. 227, 251-52 (1999) (interpreting a carjacking statute with aggravating factors to create different offenses, rather than sentencing elements, and thus requiring the prosecution to establish those factors beyond all reasonable doubt). See generally Amy D. Ronner, *The Demise of the Reasonable Doubt Standard: The Toxic Watts and Putra Decision*, 60 U. PITT. L. REV. 373 (1999) (tracing the historical development of a lower standard applied in sentencing hearings); Deborah Young, *Fact-Finding at Federal Sentencing: Why the Guidelines Should Meet the Rules*, 79 CORNELL L. REV. 299 (1994) (same).

principle that criminal proceedings rely on accusations proved by the Government, not on inquisitions conducted to enhance its own prosecutorial power.²¹⁵

The dissent, written by Justice Scalia,²¹⁶ disagreed with what the dissenting Justices considered to be an extension of *Griffin*.²¹⁷ According to the dissenting Justices, *Griffin* itself was wrongly decided: it is one thing to grant a defendant the contempt exemption — with which the dissenting Justices had no quarrel — it is quite another to supplement this exemption with an evidentiary privilege against natural inferences from silence.²¹⁸ To extend the ambit of *Griffin* thus presents an impediment to accurate fact-finding during sentencing in circumstances when the traditional rationales for the privilege against self-incrimination have lost much of their force because the defendant has voluntarily incriminated herself by pleading guilty.²¹⁹

Indeed, the logical structure of the majority's opinion emphasizes its own weakness. This structure would stand only if we left its foundations untouched. However, as explained by Justice Scalia²²⁰ — and, more forthrightly, by Justice Thomas²²¹ — there is a problem with the major premise of the majority's argument: *Griffin* was not necessarily a good decision. According to Justice Thomas, *Griffin*'s addition of a questionable evidentiary privilege to the well-accepted contempt exemption "lacks foundation in the Constitution's text, history, or logic."²²² As indicated, it is difficult to counter this argument within the bounds of the traditional rationales for the privilege.

The anti-pooling rationale for the privilege more easily resolves this disagreement. First, it justifies *Griffin* and therefore fortifies the major premise of the majority in *Mitchell*.²²³ More importantly, under the anti-pooling rationale, the *Mitchell* Court is right in its outcome but wrong in its reasoning. The key to understanding this point is the economic fallacy committed by Justice Kennedy in the above passage. According to Justice Kennedy, if defendants were left unprotected by *Griffin* at the sentencing stage, then prosecutors could charge them with crimes without specifying all aggravating factors.²²⁴ A prosecutor

²¹⁵ *Mitchell*, 526 U.S. at 325.

²¹⁶ Justice Thomas joined Justice Scalia's dissent and also dissented separately.

²¹⁷ *Mitchell*, 526 U.S. at 337 (Scalia, J., dissenting).

²¹⁸ *Id.* at 335–36.

²¹⁹ *See id.* at 332.

²²⁰ *Id.* at 331–36.

²²¹ *Id.* at 341–43 (Thomas, J., dissenting).

²²² *Id.* at 341.

²²³ By focusing on the elimination of the pooling problem, our justification also differs from Professor Stuntz's recent version of the excuse-based rationale. Cf. Stuntz, *Self-Incrimination*, *supra* note 12, at 1261–87.

²²⁴ *Mitchell*, 526 U.S. at 325.

could then secure a guilty plea and prove the aggravating factors by enlisting the defendant's self-damaging silence or testimony.²²⁵ This grim scenario depends on the defendant's entering a guilty plea. In a regime without *Griffin*, however, a defendant who is charged with a general crime and knows that the prosecution is unable to prove its aggravating specifics would only plead guilty if she were offered an attractive plea bargain. Absent such an offer, a rational guilty defendant would plead not guilty and then either remain silent (and enjoy the pre-conviction protection of *Griffin*) or perjuringly testify to her innocence and thus adversely affect innocent defendants by impugning the credibility of their truthful testimony. Justice Kennedy's grim scenario therefore would not materialize. The prosecution could not rely on the defendant to provide evidence necessary to prove the crime's aggravating circumstances. Furthermore, absent *Griffin*, the legal system would waste judicial resources and promote the pooling of innocents and criminals. For these reasons, our rationale favors the application of *Griffin* at sentencing hearings even in cases in which there is a sustainable distinction between elements of the crime and sentencing facts.

The application of *Griffin* at the sentencing stage also creates an important incentive for defendants to plead guilty. Together with silence, a guilty plea efficiently separates the guilty from the innocent. In contrast, if it had not applied *Griffin* to the sentencing stage in accordance with the dissenting opinions, the Court would have substantially weakened this separation, wasting trial time and other resources. Thus, while the dissenters argued that *Mitchell* weakens the crime-control function of sentencing procedures, the opposite is actually true: by inducing more defendants to plead guilty, *Mitchell* increases the efficacy of the criminal justice machinery.²²⁶

V. TESTABLE IMPLICATIONS

From a legal viewpoint, our most important conclusions concern the effect of the right to silence on wrongful convictions and, more

²²⁵ *Id.*

²²⁶ *But see* Bradley, *Silence*, *supra* note 80, at 88–89. Professor Bradley distinguishes *Griffin* from *Mitchell* on the basis of the prior-conviction impeachment risk present in the former but not in the latter. In the *Griffin* situation, innocent ex-convicts might choose not to testify at trial because testifying would render them vulnerable to impeachment based on their prior convictions. Professor Bradley argues that, as such, no penalty in the form of adverse inferences should be assessed to defendants who remain silent in that situation. *Id.* In contrast, the risk of such impeachment is virtually non-existent at the sentencing stage, and thus, according to Professor Bradley, the adverse inference from silence is warranted in that situation. *Id.* As explained in the text, we believe that *Griffin* and *Mitchell* should hold the line and that *Mitchell* is justified by the resulting incentives for a guilty defendant: an incentive not to testify perjuringly and an incentive to enter a guilty plea.

generally, on the legal system's ability to separate the guilty from the innocent. These effects are only observable in a small subset of cases, such as those overturned on appeal. Accordingly, we focus on those implications of our model that are testable using available data. Those implications include: (1) the right to silence reduces the conviction rate; and (2) the right to silence induces guilty suspects to switch from false exculpatory statements to silence, rather than from confessions to silence.

According to our model, criminals rationally exercise the right to silence to reduce the risk of conviction, which in turn reduces the risk that innocents are wrongfully convicted. We therefore expect that the right to silence reduces the proportion of suspects who are convicted. Opponents of the right similarly assert that it reduces conviction rates;²²⁷ consequently, they favor the right's abolition, a recommendation that we reject. By contrast, supporters of the right claim that it exerts an insignificant effect on the conviction rate.²²⁸ Our model casts doubt on this observation but supports the right on the different grounds advanced above.

One can test our model's prediction that *Miranda* reduced the conviction rate using annual FBI data on crime clearance rates.²²⁹ In a study examining the FBI's data, Professors Paul Cassell and Richard Fowles estimated regression models for a variety of crime categories, using the clearance rate as the dependent variable. Professors Cassell and Fowles included a dummy variable (which equals zero before 1966 and one thereafter) to capture *Miranda*'s effect on the clearance rate. This study showed that this dummy variable was significant at the 0.01 level for serious crimes and was negatively signed:²³⁰ in other words, *Miranda* had significantly reduced the clearance rate. This result is consistent with the first testable implication of our model (declining conviction rates).

Our model also implies that suspects who exercise the right to silence would otherwise make false exculpatory statements. Our assumption that confessions secure a small (but positive) remission of

²²⁷ See, e.g., Paul G. Cassell, *Miranda's Social Costs: An Empirical Reassessment*, 90 NW. U. L. REV. 387, 484 (1996) (arguing that "[r]oughly 28,000 arrests for serious crimes of violence and 79,000 arrests for property crimes slip through the criminal justice system due to *Miranda*").

²²⁸ See, e.g., Richard A. Leo, *The Impact of Miranda Revisited*, 86 J. CRIM. L. & CRIMINOLOGY 621, 677-78 (1996); Stephen J. Schulhofer, *Miranda's Practical Effect: Substantial Benefits and Vanishingly Small Social Costs*, 90 NW. U. L. REV. 500, 544-47 (1996).

²²⁹ These rates are, admittedly, different from conviction rates because the police can clear a case without securing a conviction. Cassell, *supra* note 227, at 398-99; Paul G. Cassell & Richard Fowles, *Handcuffing the Cops? A Thirty-Year Perspective on Miranda's Harmful Effects on Law Enforcement*, 50 STAN. L. REV. 1055, 1065-66 (1998); see also John J. Donohue III, *Did Miranda Diminish Police Effectiveness?*, 50 STAN. L. REV. 1147 (1998) (discussing the Cassell-Fowles thesis).

²³⁰ Cassell & Fowles, *supra* note 229, at 1082-84.

sentences implies that suspects confess if, and only if, the evidence against them is strong; neither exculpatory statements nor resort to the right to silence allows them to evade conviction. This testable implication distinguishes our model from other hypotheses in the literature. The right's opponents, such as Professor Cassell, maintain that it induces suspects to switch from confession to silence,²³¹ while the right's supporters, such as Professors Stephen Schulhofer²³² and Richard Leo,²³³ claim that it insignificantly affects the confession rate because of the police's successful adaptation to the right's requirements.

A middle-ground position also exists. Professor George Thomas suggests that the right generates two mutually offsetting effects on the conviction rate. On the one hand, it motivates some guilty suspects to switch from confession to silence, while on the other hand, it induces other guilty suspects to switch from silence to false, and ultimately self-defeating, exculpatory statements in the belief that the existence of a silence option renders such statements more credible.²³⁴

Our second prediction, that the right to silence causes guilty defendants to switch from exculpatory statements to silence, is more difficult to test because outcomes of interrogation are not reported independently. Several early studies considered *Miranda*'s immediate impact by comparing police files for earlier years with files on interrogations conducted after the *Miranda* decision. According to Professor Cassell, the best reading of these early data reveals that the right to silence reduced confessions by 16%.²³⁵ Professor Schulhofer, however, argues that an appropriate reading of the early data reveals that *Miranda* reduced confessions by no more than 4%.²³⁶ In our view — and that of Professor Thomas²³⁷ — the data are too contaminated with measurement error (including inconsistent classification schemes) to draw any meaningful conclusions about *Miranda*'s effects. In particular, because the Supreme Court delivered *Miranda* without prior warning, data collection on interrogation outcomes that preceded *Miranda* began only after the decision. This fact alone obviously introduces a risk of data contamination.

²³¹ Cassell, *supra* note 227, at 394.

²³² Schulhofer, *supra* note 228.

²³³ Leo, *supra* note 228.

²³⁴ See, e.g., George C. Thomas III, *Is Miranda a Real-World Failure? A Plea for More (and Better) Empirical Evidence*, 43 UCLA L. REV. 821 (1996) [hereinafter Thomas, *Real-World Failure*]; George C. Thomas III, *Plain Talk About the Miranda Empirical Debate: A "Steady-State" Theory of Confessions*, 43 UCLA L. REV. 933 (1996).

²³⁵ Cassell, *supra* note 227, at 445. Professor Cassell and Bret Hayman and, separately, Professor Leo conducted studies of interrogation. See Cassell & Hayman, *supra* note 60; Leo, *supra* note 60. Cassell and Hayman claim that their estimated confession rate is consistent with rates reported in early post-*Miranda* studies. See Cassell & Hayman, *supra* note 60, at 858.

²³⁶ Schulhofer, *supra* note 228, at 545.

²³⁷ Thomas, *Real-World Failure*, *supra* note 234, at 826–31.

In contrast, the British government funded a number of research studies on interrogation outcomes before introducing the Criminal Justice and Public Order Act 1994 (CJPOA),²³⁸ which allows adverse inferences to be drawn from pretrial silence in some circumstances.²³⁹ These studies include the Phillips-Brown study, which examined the interrogations of 1785 suspects, distributed across eight police stations.²⁴⁰ To the best of our knowledge, the Bucke-Street-Brown study²⁴¹ is the only one to use post-1994 data to explore the effect of the CJPOA. This study describes the interrogations of 1227 suspects at the same police stations as the Phillips-Brown study and uses the same classification scheme. The Bucke-Street-Brown study reports that 6% of suspects did not answer any questions, as compared to 10% pre-CJPOA, and that an additional 10% of suspects did not answer some questions, as compared to 13% pre-CJPOA.²⁴² Hence, the CJPOA significantly reduced the percentage of silent suspects and affected primarily suspects with legal representation.²⁴³ Moreover, there was no significant change in the confession rate. The Bucke-Street-Brown study describes the results as follows: “[W]hile suspects may be talking more to officers during police questioning, it would appear that they are no more likely to make admissions than in the past. Some officers described this development as an increase in ‘the flannel factor.’”²⁴⁴

In short, the data suggest that the CJPOA created an incentive to switch from silence to self-exonerating lies. The Bucke-Street-Brown study’s results are bivariate correlations, indicating that other factors may have caused the increase in exculpatory statements. There are insufficient data available to estimate a complete model. However, there are grounds for believing that exogenous variations *reinforced* the CJPOA’s effects. As noted by David Brown, a comparison of studies suggests that the proportion of silent suspects increased during the early 1990s, the years before the CJPOA.²⁴⁵ This trend was probably due to the rising proportion of represented suspects in the aftermath of the Police and Criminal Evidence Act 1984,²⁴⁶ which strengthened

²³⁸ C. 33 (Eng.).

²³⁹ *Id.* § 34.

²⁴⁰ For a survey of research studies conducted before passage of CJPOA, see Roger Leng, *The Right-to-Silence Debate*, in SUSPICION AND SILENCE: THE RIGHT TO SILENCE IN CRIMINAL INVESTIGATIONS 18 (David Morgan & Geoffrey M. Stephenson eds., 1994).

²⁴¹ TOM BUCKE, ROBERT STREET & DAVID BROWN, *THE RIGHT OF SILENCE: THE IMPACT OF THE CRIMINAL JUSTICE AND PUBLIC ORDER ACT 1994* (2000). We are grateful to Jackie Hodgson for bringing this study to our attention and to its authors for providing clarifications.

²⁴² *Id.* at 31.

²⁴³ *Id.* at 30–34.

²⁴⁴ *Id.* at 34–35.

²⁴⁵ See DAVID BROWN, *PACE TEN YEARS ON: A REVIEW OF THE RESEARCH 172–75* (1997).

²⁴⁶ C. 60 (Eng.).

suspects' rights to legal advice and representation. According to the Bucke-Street-Brown study, lawyers typically advised silence prior to the CJPOA but recommended that suspects provide exculpatory statements after the CJPOA.²⁴⁷ In sum, informal evidence indicates that the exogenous variable primarily responsible for changes in the pre-CJPOA silence rate interacted with the new incentives to reduce the proportion of silent suspects after the CJPOA.

The Bucke-Street-Brown study's conclusion concerning the switch to false exculpatory statements reinforces the second testable implication of our model. This conclusion contradicts theories that deny that *Miranda* significantly affected interrogations,²⁴⁸ that predict that *Miranda* actually increased the proportion of suspects who make exculpatory statements,²⁴⁹ or that link *Miranda* to a decrease in the proportion of confessions.²⁵⁰ Moreover, other studies echo the conclusions of the Bucke-Street-Brown study. For example, Senator Arlen Specter and the Vera Institute both report that suspects interrogated before the *Miranda* decision often made false statements,²⁵¹ while Professor Cassell and Bret Hayman report that none of the 173 suspects interrogated in their post-*Miranda* sample was "locked . . . into a false alibi."²⁵² Finally, we note that the Bucke-Street-Brown study's results mirror the example of Singapore, where the demise of the right to silence correlated with a significant *decrease* in the number of confessions and an increase in the number of denials.²⁵³

VI. CONCLUSION

Miranda's critics assert that criminals are the exclusive beneficiaries of the right to silence, which imposes a social cost in the form of lost confessions. Moreover, they assert that it is impossible to balance this cost against any social benefits because innocent suspects choose to tell the truth under any regime. Consequently, *Miranda* and its progeny impede the search for truth and can claim justification only as an attempt to protect more fundamental values. However, critics since

²⁴⁷ BUCKE, STREET & BROWN, *supra* note 241, at 24–25.

²⁴⁸ See, e.g., Schulhofer, *supra* note 228, at 544–45.

²⁴⁹ See, e.g., Thomas, *Real-World Failure*, *supra* note 234, at 831.

²⁵⁰ See, e.g., Cassell, *supra* note 227, at 394.

²⁵¹ See *Controlling Crime Through More Effective Law Enforcement: Hearings Before the Subcomm. on Criminal Laws and Procedures of the Senate Comm. on the Judiciary*, 90th Cong. 199–206 (1967) (statement of Arlen Specter, District Attorney for the City and County of Philadelphia, PA); Vera Inst. of Justice, *Taping Police Interrogations in the 20th Precinct, N.Y.P.D.* (Apr. 1967) (unpublished manuscript, on file with the Harvard Law School Library).

²⁵² Cassell & Hayman, *supra* note 60, at 869 tbl.4.

²⁵³ Alan Khee-Jin Tan, *Adverse Inferences and the Right to Silence: Re-examining the Singapore Experience*, 1991 CRIM. L. REV. 471; Meng Heong Yeo, *Diminishing the Right to Silence: The Singapore Experience*, 1983 CRIM. L. REV. 89, 94–95.

Bentham have characterized these values as incoherent, postulated, and unsupportable.

We accept the factual claim that guilty suspects alone exercise the right to silence and that the right therefore imposes some social cost. Beyond this point, however, we reject the entire line of the critics' arguments. Our disagreement hinges on the crucial, but previously unexamined, proposition that only guilty suspects benefit from the right because they alone exercise it. If correct, this proposition indeed precludes a consequentialist defense of *Miranda*. Hence, our demonstration that the critics' argument is false allows us to reinterpret *Miranda* jurisprudence along consequentialist lines.

This Article demonstrates that the right to silence helps factfinders distinguish between factually innocent and guilty suspects and defendants. We arrive at this conclusion by bringing to the fore an important feature of the right to silence: a guilty suspect's self-interested response to questioning can impose externalities (in the form of wrongful conviction) on innocent suspects and defendants who tell the truth but cannot corroborate their responses. Absent a right to silence, guilty suspects would make false exculpatory statements if they believed that their lies might not be exposed. Recognizing guilty suspects' incentives, the factfinder would rationally discount the probative value of uncorroborated exculpatory statements, at the expense of some unfortunate innocents who could not corroborate their true exculpatory stories. By contrast, under the right-to-silence regime, neither pooling nor the ensuing wrongful convictions materialize: for as Bentham famously noted, innocents still tell the truth, whereas guilty suspects separate themselves by rationally exercising the right.

The right to silence only operates in this way in legal systems that observe the proof-beyond-all-reasonable-doubt requirement for conviction. Guilty suspects choose to exercise their right to silence because lies told in court or during police interrogation are refutable, whereas silence may help a guilty defendant obtain an acquittal based on reasonable doubt.

Our argument implies that the revocation of *Miranda* would increase the conviction rate among both guilty and innocent defendants, without significantly affecting the confession rate. *Miranda*'s defenders also contend that the right to silence does not significantly affect confessions, while *Miranda*'s critics claim that the right brings the conviction rate down by reducing guilty suspects' incentives to confess. Our argument therefore uniquely explains both empirical evidence that *Miranda* reduced the conviction rate and empirical evidence that British legislation that eroded the right to silence increased the number of exculpatory statements without significantly changing the confession rate.

This Article demonstrates that the right to silence reduces the number of wrongful convictions. It also demonstrates that this ration-

ale for the right outscore its competitors by both justifying and coherently explaining each branch of Fifth Amendment jurisprudence. The proposed rationale is therefore not only normatively sound, but is also effective in its descriptive role.

APPENDIX

In this Appendix, we provide and analyze a numerical example of the model presented in Part III.²⁵⁴ For the reader's convenience, we provide a table of the symbols we employ and their definitions at the end of the Appendix.

Suppose that the suspect met the witness, W , on one of four occasions, which we label 1, 2, 3, and c , and that c is the occasion of the crime. All circumstantial evidence pertaining to the suspect is encapsulated in a set of prior probabilities; p_t denotes the prior probability that the suspect met W on innocent occasion t . We allow p , the prior probability that the suspect met W on the occasion of the crime, to take any value between 0 and 1, and for the purposes of this example, we set $p_1=(1-p)/4$ and $p_2=p_3=3(1-p)/8$ so the prior probabilities p_1 , p_2 , p_3 , and p sum to 1.

The suspect is presented to W for identification. W may be able to exonerate an innocent suspect, but he cannot uniquely identify the perpetrator of the crime. Faced with a suspect, W either will say, "I met the suspect on innocent occasion t or at the scene of the crime," or else will exonerate the suspect unequivocally. The former response will be referred to as a " t -report." If the suspect is, in fact, the perpetrator, then W will make each t -report with probability q_i ; and if the suspect met W on innocent occasion t , W will make the t -report with probability q_t , and otherwise will provide an exonerating report.²⁵⁵

For expositional convenience, we assume that $q_1=5/12$ and that $q_2=q_3=7/24$. The table below summarizes the likelihood that W will make each possible report, for each possible occasion on which the suspect might have met W :

²⁵⁴ For a formal presentation of the entire model, see Seidmann, *supra* note 66.

²⁵⁵ Given the already postulated number of innocent occasions: $q_1+q_2+q_3=1$.

OCCASIONS				
	1	2	3	c
{1}	7/12	0	0	0
{2}	0	17/24	0	0
{3}	0	0	17/24	0
REPORTS ²⁵⁶				
{1, c}	5/12	0	0	5/12
{2, c}	0	7/24	0	7/24
{3, c}	0	0	7/24	7/24

Note that W 's report is always reliable in the sense that he never identifies a suspect he met on innocent occasion t_1 as a person he met on innocent occasion t_2 .

We assume that the suspect knows the circumstantial evidence that made her a suspect (and thereby the prior probabilities p_1 , p_2 , p_3 , and p). The suspect is also assumed to know the occasion on which she met W . When the suspect responds to the police question, "When did you meet W ?" with the response "I met W on occasion t_i ," her statement will be referred to as a " t -statement"; furthermore, the combination of a t -report and the t -statement will be called " t -evidence."

After observing all the evidence — the circumstantial evidence, the witness's report, and the suspect's statement — the jury computes the probability that the suspect is guilty [or innocent] using Bayes' Rule.²⁵⁷ The jury convicts [acquits] the suspect if this posterior probability exceeds [falls short of] the fixed level of required proof. The jury is indifferent between conviction and acquittal if this posterior probability equals the fixed level of required proof. Following John Kaplan,²⁵⁸ we set this level to $I/(I+G)$, where I denotes the social cost of convicting an innocent suspect and G denotes the cost of acquitting a guilty suspect. By setting the disutility ratio I/G to $9/1$, we set the required proof threshold to $9/10$.

Finally, our model accommodates the possibility that a suspect could rationally decide to confess to the crime. We therefore assume that, while a guilty suspect receives zero utility from conviction after

²⁵⁶ "Reports" refers to sets of occasions on which the witness reports that he may have met the suspect.

²⁵⁷ According to Bayes' Rule, the posterior probability of guilt, given evidence e , is the product of the prior probability of guilt (p) and the probability of e if the suspect is guilty, divided by the sum across occasions (t) of the probability that the suspect met W on occasion t (p_t) times the probability of evidence e when the encounter occurred on occasion t ($t=1, 2, 3, c$). Formally, $\text{prob}(t=c|e) = p \cdot \text{prob}(e|t=c) / \sum p_t \cdot \text{prob}(e|t)$.

²⁵⁸ See John Kaplan, *Decision Theory and the Factfinding Process*, 20 STAN. L. REV. 1065, 1071-75 (1968).

trial, she receives positive utility from confession through reduced punishment and saved trial expenses. For the purposes of our example, we assume that the utility from confession is less than $7/24$ times the utility of acquittal.

If the suspect exercises the right to silence, the jury will only use the report and the circumstantial evidence to form its posterior belief. If W makes a 1-report, by applying Bayes' Rule, the jury will calculate that the suspect is the criminal with probability $4p/(1+3p)$.²⁵⁹ After either a 2-report or 3-report, the jury will calculate the posterior probability of guilt as $8p/(3+5p)$.²⁶⁰ Note, for future reference, that $8p/(3+5p) < 4p/(1+3p)$.²⁶¹

We now use these numbers to compute perfect-Bayesian-equilibrium outcomes as the strength of the circumstantial evidence varies.²⁶² At any such equilibrium:

(1) the guilty suspect cannot raise her payoff by changing her statement, given the statements made by innocent suspects and the jury's strategy;

(2) all innocent suspects tell the truth, and cannot do better by making any other statement;

(3) the jury's beliefs satisfy Bayes' Rule whenever the evidence it observes is realized with positive probability on the equilibrium path;

(4) the jury acquits [convicts] whenever it believes that the suspect is guilty with probability less than [more than] $9/10$.

A. The Right to Silence Unavailable

We start by describing equilibria that emerge when suspects do not have a right to silence. In these games, the jury draws an adverse inference from silence as, *ex hypothesi*, all innocent suspects tell the truth. The guilty suspect does better by either lying or confessing than by refusing to answer police questions, so she will never be silent. We now describe equilibria as p (the strength of the circumstantial evidence) varies.

1. *Weak Evidence* ($p < 9/13$). — If the guilty suspect makes some t -statement, the jury will acquit if W makes the corresponding t -report. The jury's posterior belief that the suspect is guilty will fall short of the proof threshold, since $p < 9/13$ implies that $4p/(1+3p)$ is less than

²⁵⁹ This number is derived from Bayes' Rule by substituting values for p , and q , into the expression: $p \cdot q / (q_1(p + p_1))$.

²⁶⁰ This number is derived from Bayes' Rule by substituting values for p_2 , p_3 , q_2 , and q_3 into the expressions: $p \cdot q_2 / (q_2(p + p_2))$ and $p \cdot q_3 / (q_3(p + p_3))$.

²⁶¹ This inequality follows directly from our assumption that the suspect may be innocent (that is, $p < 1$).

²⁶² See generally FUDENBERG & TIROLE, *supra* note 65, § 8.2, at 324-36 (explaining perfect Bayesian equilibrium).

$9/10$, and $8p/(3+5p) < 4p/(1+3p)$.²⁶³ However, the jury will convict if the guilty suspect's t -statement is inconsistent with W 's report. Knowing that the witness is less likely to contradict a 1-statement than either a 2-statement or a 3-statement (as q_1 equals $5/12$, which is greater than q_2 and q_3 , which equal $7/24$), the guilty suspect makes a 1-statement at equilibrium. The guilty suspect does not confess under weak evidence because the premium for confession is low enough that the guilty suspect is better off gambling that W confuses her with suspect 1.²⁶⁴ By contrast, innocent suspects tell the truth and are always acquitted: the jury acquits after observing 2-evidence or 3-evidence (as innocents alone make such statements); and it acquits if W exonerates an innocent suspect or if it observes 1-evidence (as $p < 9/13$).

2. *Moderate Evidence* ($9/13 < p < 9/10$). — Under these circumstances, the guilty suspect cannot choose always to make the 1-statement at equilibrium. If she does so, the jury's posterior probability of guilt, after observing 1-evidence, will exceed $9/10$.²⁶⁵ The guilty suspect, as a result, would always be convicted, and contrary to equilibrium criterion (1) above, could do better by unexpectedly making the 2-statement. Instead, at equilibrium, the guilty suspect makes the 1-statement with probability $9(1-p)/4p$ and otherwise makes either the 2-statement or the 3-statement, each with probability $(13p-9)/8p$.²⁶⁶ The jury, in turn, always acquits after observing either 2-evidence or 3-evidence and acquits with probability $7/10$ after observing 1-evidence.

The various probabilities are constructed such that the jury's posterior probability that the suspect is guilty, after observing 1-evidence, is at the level of proof ($9/10$) that leaves it precisely indifferent between conviction and acquittal.²⁶⁷ At the same time, the probability of ac-

²⁶³ Note that $4p/(1+3p)$ represents the highest probability of guilt that a jury could infer from 1-evidence. It is calculated from Bayes' Rule on the assumption that every guilty suspect makes a 1-statement. The jury must make comparable assumptions to derive posterior beliefs of $8p/(3+5p)$ from 2- and 3-evidence.

²⁶⁴ The guilty suspect's payoff if she makes the 1-statement is $7/24$ (the probability that the witness makes the 1-report) multiplied by the payoff of an innocent verdict. We have assumed, however, that the premium for confession is less than this value. See *supra* pp. 505-06.

²⁶⁵ Recall that the jury's posterior probability would be $4p/(1+3p)$, which exceeds $9/10$ whenever $p > 9/13$.

²⁶⁶ $p > 9/13$ implies that $9(1-p)/4p < 1$.

²⁶⁷ At this equilibrium, the jury observes 1-evidence when the suspect is guilty [respectively, suspect 1] with probability q , times $9(1-p)/4p$ [respectively, with probability q_1]. Hence, using Bayes' Rule, the jury believes that the suspect is guilty with probability $9/10$ after observing 1-evidence. The jury is therefore indifferent between acquitting and convicting and also across all random mixtures between acquittal and conviction; thus, acquitting with probability $7/10$ is the best response to 1-evidence. Yet the jury observes 2-evidence when the suspect is guilty [respectively, suspect 2] with probability q_2 , times $(13p-9)/8p$ [respectively, with probability q_2]. Hence, using Bayes' Rule, the jury believes that the suspect is guilty with probability $(13p-9)/(10p-6)$ after observing 2-evidence; and $p < 9/10$ implies that this probability is less than $9/10$, so the jury acquits

quittal is calibrated such that the guilty suspect is indifferent between making the 1-statement, which risks conviction even if W does not contradict it, and making the 2- or the 3-statements, which W is more likely to contradict.²⁶⁸ Suspects 2 and 3 are always acquitted and therefore have no incentive not to tell the truth.²⁶⁹ Suspect 1 is convicted with probability $1/8$ (when W does not exonerate her and the jury convicts after 1-evidence); but she still prefers telling the truth either to making another t -statement (because W will assuredly contradict her statement and the jury will convict) or to confessing (as the premium for confession is low).

3. *Strong Evidence ($p > 9/10$)*. — On the one hand, if the prior probability of guilt (p) exceeds the fixed level of required proof ($9/10$), the guilty suspect cannot improve on confessing, for W 's report is partially informative; thus, there cannot be an equilibrium at which the guilty suspect expects to reduce the jury's belief that she is guilty by making a false statement. On the other hand, the jury must expect the guilty suspect to make each exculpatory statement with positive probability rather than certainty. Otherwise, the guilty suspect will do better by making an unexpected exculpatory statement in the hope that she will be acquitted if it turns out to be consistent with W 's report.

At equilibrium, the guilty suspect confesses with probability $(10p-9)/p$, makes statement 1 with probability $9(1-p)/4p$ and makes each of the 2-statement and the 3-statement with probability $27(1-p)/8p$. The jury convicts the guilty suspect with positive probability after observing any t -evidence (the exact probability depending on the utility earned by confessing in each case). The jury always convicts the guilty suspect after observing any statement inconsistent with W 's report. In residual cases, the jury acquits the guilty suspect.

The various probabilities are constructed such that the guilty suspect mixes between confession and each exculpatory statement. The jury's posterior probability that the suspect is guilty after observing any t -evidence is exactly $9/10$, so the jury is indifferent between the two possible verdicts; and its likelihood of convicting the guilty suspect

after observing 2-evidence. Identical arguments apply to the jury's beliefs after observing 3-evidence.

²⁶⁸ If the guilty suspect makes the 2-statement [respectively, the 3-statement], then she is acquitted if and only if W makes the 2-report [respectively, the 3-report], an event that occurs with probability $7/24$. If the guilty suspect makes the 1-statement, she is only acquitted if W makes the 1-report, an event that occurs with probability $q_1 = 5/12$. Given the jury's response to 1-evidence, the guilty suspect is acquitted with probability $5/12$ times $7/10 = 7/24$ when she makes the 1-statement. She is therefore indifferent among making each of the three t -statements and, ipso facto, across all random mixtures among the t -statements. As the premium for confession is sufficiently low, the guilty suspect's chosen strategy is indeed her best response.

²⁶⁹ W either exonerates suspect 2 or makes the 2-report. At equilibrium, the jury acquits after either of W 's reports, and thus suspect 2 is always acquitted. An identical argument applies to Suspect 3.

after observing any t -evidence makes the guilty suspect indifferent between confessing and making each t -statement. Note that in this scenario innocent suspects are wrongfully convicted with positive probability when W does not exonerate them.

B. The Right to Silence Available

We now turn to games in which the suspect has a right to silence, distinguishing between cases according to the strength of the circumstantial evidence. Recall that the jury relies solely on W 's report if the suspect exercises the right to silence.

1. *Weak Evidence* ($p < 9/13$). — If the evidence is weak, the jury will acquit the suspect after observing any t -evidence. As a silent suspect will invariably be acquitted, a guilty suspect cannot improve on silence. At the same time, the jury acquits the innocent suspects, as it draws a favorable inference from their statements. Therefore, these suspects have no incentive not to tell the truth.

2. *Intermediate Evidence* ($9/13 < p < 27/35$). — If the circumstantial evidence is intermediate, the jury will acquit after observing either 2- or 3-evidence and will convict after observing 1-evidence.²⁷⁰ The guilty suspect will be silent because a jury is more likely to acquit a silent guilty suspect than one making any false statement.²⁷¹ Furthermore, the premium for confession is small enough that the guilty suspect is better off remaining silent than confessing. In light of the guilty suspect's silence, the jury acquits the innocent suspects, as it draws a favorable inference from their statements. Therefore, these suspects have no incentive not to make truthful statements.

3. *Very Strong Evidence* ($p > 27/35$). — Under these circumstances, the jury will convict after observing any t -evidence. If the guilty suspect is silent, the jury will also assuredly convict her. Therefore, the guilty suspect is never silent — she confesses in order to secure the premium for confessing. If the guilty suspect never exercises her right to silence, she must make the same equilibrium choices that she would make if the right were unavailable. Correspondingly, the jury must respond to evidence as it would respond to it in the absence of the right, sometimes convicting innocent suspects.²⁷² Hence, the right to silence

²⁷⁰ The former assertion follows from $p < 27/35$, while the latter assertion follows from $p > 9/13$.

²⁷¹ Specifically, the guilty suspect would be acquitted with probability $q_2 + q_3 = 7/12$ if she were silent. If she unexpectedly made statement 1, then she would be acquitted if and only if W made the 1-report, that is, with probability $5/12$. The guilty suspect is therefore more likely to be acquitted if she is silent, so she has no incentive to deviate by making statement 1 (or any other false statement).

²⁷² See *supra* Appendix section A.3.

has no effect on any suspect's choice when the evidence is very strong, and is therefore irrelevant in that circumstance.²⁷³

Conclusion

We can now use these results to describe how and when the right to silence affects interrogation outcomes. If the evidence is weak, the right to silence is advantageous solely to the guilty suspect. Absent the right, she will make the 1-statement, gambling that *W* confuses her with suspect 1. The jury acquits if *W* indeed makes the 1-report but convicts the guilty suspect otherwise. By contrast, when the right to silence is available, the guilty suspect assures her acquittal by exercising the right. Innocent suspects are acquitted in either instance.

If the evidence is moderate or intermediate ($9/13 < p < 27/35$), the guilty suspect gains from exercising the available right; suspect 1 also benefits from the guilty suspect's silence because she is no longer at risk of wrongful conviction (if *W* does not exonerate her unequivocally). Finally, the right to silence is immaterial if the evidence is very strong ($p > 27/35$) because the guilty suspect will not choose to exercise the right.

SYMBOLS	
<i>W</i>	= witness
<i>t</i>	= any of the four occasions on which the witness might have met the suspect
<i>c</i>	= the criminal occasion
p_t	= the probability that <i>W</i> met the suspect on occasion <i>t</i> , conditional on the circumstantial evidence alone
<i>p</i>	= the probability that <i>W</i> met the suspect at the crime scene, conditional on the circumstantial evidence alone
q_t	= the probability that <i>W</i> confuses innocent occasion <i>t</i> with the criminal occasion and vice versa
<i>t</i> -statement	= "I met the witness on innocent occasion <i>t</i> " (made by any of the suspects)
<i>t</i> -report	= "I met the suspect either on innocent occasion <i>t</i> or at the scene of the crime" (made by <i>W</i>)
<i>I</i>	= the social cost of a wrongful conviction
<i>G</i>	= the social cost of a wrongful acquittal

²⁷³ This observation is related to a general property of games. If an available strategy is never chosen at equilibrium, then making that strategy unavailable will not affect equilibrium play.