

# DETECTION AVOIDANCE

CHRIS WILLIAM SANCHIRICO\*

*In practice, the problem of law enforcement is half a matter of what the government does to catch violators and half a matter of what violators do to avoid getting caught. In the theory of law enforcement, however, although the state's efforts at "detection" play a decisive role, offenders' efforts at "detection avoidance" are largely ignored. Always problematic, this imbalance has become critical in recent years as episodes of corporate misconduct spur new interest in punishing process crimes like obstruction of justice and perjury. This Article adds detection avoidance to the existing theoretical frame with an eye toward informing the current policy debate. The exercise leads to several conclusions. First, despite recent efforts to strengthen laws governing obstruction and perjury, sanctioning is relatively ineffective at discouraging detection avoidance. Sanctions send a mixed message to the offender: Do less to avoid detection, but to the extent you still do something, do more to avoid detection of your detection avoidance. The Article argues that detection avoidance is often more effectively deterred through the structural design of evidentiary procedure (inclusive of investigation). Specifically advocated are devices that exploit the cognitive psychological shortcomings of individuals and the sociological fragility of their collusive arrangements.*

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\* Copyright © 2006 by Chris William Sanchirico. Professor of Law, Business, and Public Policy, the University of Pennsylvania Law School and the Wharton School's Business and Public Policy Department. E-mail: csanchir@law.upenn.edu. For helpful comments, thanks to Jennifer Arlen, Samuel Buell, John Coates, George Fisher, Barry Friedman, Nuno Garoupa, Robert Inman, Jason Johnston, Ehud Kamar, Daniel Klerman, Geoffrey Miller, Nicola Persico, Daniel Richman, James Sanchirico, David Skeel, Alex Stein, Christian Turner, and workshop participants at the American Law and Economics Association's 2006 Annual Meeting, the Benjamin N. Cardozo School of Law, the Duke University School of Law, the Fordham University School of Law, the Georgetown University Law Center, the New York University School of Law, and the University of Pennsylvania Law School. Thanks also to Zheng Zhou for valuable research assistance.

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## INTRODUCTION

People who violate the law go out of their way to avoid getting caught. This is one of the defining features of law enforcement. It must have been present in the primordial pools of social organization. And in the complexity of modern criminal and regulatory administration, it remains among the most basic of organic formulae.

Unfortunately, it has never been a defining feature of our understanding of law enforcement.<sup>1</sup> Our theories of crime and regulation

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<sup>1</sup> See discussion of relevant literature *infra* Part I.

view evidence too much as something that investigators uncover, and not enough as something that violators cover up. Our theories of evidence and procedure focus too much on wrongdoing as the subject of evidence, and not enough on evidence as the object of wrongdoing. A curricular crevasse marks the spot that ought to be occupied by an integrated approach accounting for both “detection”—a term of art encompassing investigation, prosecution, and liability—and “detection avoidance.”

The divergence between theory and reality in this area has become all the more apparent and urgent in recent years as events such as those at Enron,<sup>2</sup> WorldCom,<sup>3</sup> and HealthSouth<sup>4</sup> reverberate through Congress, administrative agencies, and the courts.<sup>5</sup> Episodes of evidentiary foul play often form crucial subplots in these dramas of corporate malfeasance.<sup>6</sup> Process crimes have accordingly been swept up in the “get tough” policy posture that such events have fostered.

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<sup>2</sup> See, e.g., Superseding Indictment at 7–8, *United States v. Causey*, Cr. No. H-04-25 (S-2) (S.D. Tex. July 7, 2004), available at <http://files.findlaw.com/news.findlaw.com/wp/docs/enron/usvlay70704ind.pdf> (describing alleged financial fraud at Enron); Alexei Barrionuevo et al., *2 Enron Chiefs Are Convicted in Fraud and Conspiracy Trial*, N.Y. TIMES, May 26, 2006, at A1 (reporting conviction).

<sup>3</sup> See Third Superseding Indictment at 7–8, *United States v. Ebberts*, No. S3 02 Cr. 1144 (S.D.N.Y. 2004), available at <http://news.corporate.findlaw.com/hdocs/docs/worldcom/usebberts504ind3s.pdf> (describing alleged financial fraud at WorldCom); Ken Belson et al., *Ex-Chief of WorldCom Is Found Guilty in \$11 Billion Fraud*, N.Y. TIMES, Mar. 16, 2005, at A1 (reporting conviction).

<sup>4</sup> See Superseding Indictment at 8–10, *United States v. Scrusby*, No. CR-03-BE-0530-S (N.D. Ala. 2004) [hereinafter *Scrusby Indictment*] (describing alleged financial fraud at HealthSouth). Scrusby was acquitted, Simon Romero & Kyle Whitmire, *Former Chief of HealthSouth Acquitted in \$2.7 Billion Fraud*, N.Y. TIMES, June 29, 2005, at A1, but seventeen of his subordinates pled guilty, Milt Freudenheim, *New Indictment for Ex-Chief of HealthSouth*, N.Y. TIMES, Sept. 30, 2004, at C5. Moreover, the SEC has resumed prosecuting a separate civil action against Scrusby, which was stayed during the criminal trial. Commission’s Response to Order to Show Cause at 1–2, *SEC v. HealthSouth Corp.*, No. CV-03-J-0615-S (N.D. Ala. July 7, 2005), 2005 WL 201652. The trial is scheduled for April 2, 2007. Jay Reeves, *Scrusby Faces More Legal Woes: After Last Week’s Felony Convictions, Civil Trials Await*, HOUSTON CHRON., July 2, 2006, at 4. Scrusby must also defend against claims filed by numerous private investors. *Id.*

<sup>5</sup> See generally DAVID SKEEL, *ICARUS IN THE BOARDROOM: THE FUNDAMENTAL FLAWS IN CORPORATE AMERICA AND WHERE THEY CAME FROM* (2005) (reviewing recent corporate scandals in historical context).

<sup>6</sup> See, e.g., *Arthur Andersen LLP v. United States*, 544 U.S. 696, 698–702 (2005) (describing conviction of Enron’s auditor, Arthur Andersen, under 18 U.S.C. § 1512(b) (2000) for “corruptly persuad[ing]” others to alter and destroy audit-related documents; reversing and remanding for overbroad jury instructions); *Scrusby Indictment*, *supra* note 4, at 34–43 (charging HealthSouth CEO Richard Scrusby under 18 U.S.C. § 1621 for lying to SEC investigators and under 18 U.S.C. § 1512(b) for attempting to persuade subordinate to give false testimony); *United States v. Scrusby*, 366 F. Supp. 2d 1134, 1135, 1140 (N.D. Ala. 2005) (suppressing evidence and thereby causing dismissal of § 1621 charges); Kyle Whitmire, *As Deliberations Near in Fraud Case, Scrusby Lawyers Win Dis-*

Congress's chief response to corporate misconduct, the Sarbanes-Oxley Act,<sup>7</sup> passed in July 2002, includes several provisions broadening the definition of obstruction of justice.<sup>8</sup> The Act also directs the U.S. Sentencing Commission to conduct an emergency review<sup>9</sup> of the penalties for obstruction to insure that they are "sufficient to deter and punish."<sup>10</sup> The Commission responded in January 2003 by effectively doubling the sentence for substantially obstructive acts.<sup>11</sup>

Correspondingly, the Bush Administration includes "[s]trengthen[ing] laws to crack down on obstruction of justice" on its short list of proposals for restoring "corporate responsibility."<sup>12</sup> The administration's Corporate Fraud Task Force<sup>13</sup>—a "financial crimes SWAT team"<sup>14</sup> comprised of the nation's top regulatory and enforcement personnel<sup>15</sup>—has explicitly taken aim at evidentiary misbehavior. The category "[o]bstruction of justice, perjury, witness tampering or other obstructive behavior" rounds out "[f]alsification of . . . financial information" and "[s]elf-dealing" in the Task Force's tripartite definition of its eponym, "corporate fraud."<sup>16</sup> Task Force

*dismissal of Two Counts*, N.Y. TIMES, May 13, 2005, at C5 (describing dismissal of § 1512(b) charge).

<sup>7</sup> Sarbanes-Oxley Act of 2002, Pub. L. No. 107-204, 116 Stat. 745 (codified in scattered sections of 11, 15, 18, 28, and 29 U.S.C.).

<sup>8</sup> Sarbanes-Oxley Act §§ 802, 1102.

<sup>9</sup> Sarbanes-Oxley Act §§ 805(b), 1104(a), (c).

<sup>10</sup> Sarbanes-Oxley Act §§ 805(a), 1104(b)(4).

<sup>11</sup> The Commission increased the base level for obstruction of justice and obstruction-related offenses (including perjury) from twelve to fourteen. U.S. SENTENCING GUIDELINES MANUAL §§ 2J1.2(a), 2J1.3(a) (2005). It also added a new two-level enhancement for offenses "extensive in scope, planning, or preparation." *Id.* § 2J1.2(b)(3); *see also* U.S. SENTENCING COMM'N, REPORT TO THE CONGRESS: INCREASED PENALTIES UNDER THE SARBANES-OXLEY ACT OF 2002, at ii-iii (2003), available at [http://www.ussc.gov/r\\_congress/S-Oreport.pdf](http://www.ussc.gov/r_congress/S-Oreport.pdf) (describing combined effect of sentencing changes). The Federal Sentencing Guidelines are now "effectively advisory" rather than mandatory. *United States v. Booker*, 543 U.S. 220, 245 (2005).

<sup>12</sup> CORPORATE FRAUD TASK FORCE, FIRST YEAR REPORT TO THE PRESIDENT 1.4 (2003), available at [http://www.usdoj.gov/dag/cftf/first\\_year\\_report.pdf](http://www.usdoj.gov/dag/cftf/first_year_report.pdf) [hereinafter CORPORATE FRAUD TASK FORCE FIRST YEAR REPORT].

<sup>13</sup> Exec. Order No. 13,271, 67 Fed. Reg. 46,091 (July 9, 2002) (establishing Corporate Fraud Task Force); CORPORATE FRAUD TASK FORCE FIRST YEAR REPORT, *supra* note 12, at 1.2 ("Since its creation, the Task Force has coordinated and overseen all corporate fraud matters under investigation by the Department of Justice and enhanced inter-agency coordination of regulatory and criminal investigations.").

<sup>14</sup> President's Remarks on Corporate Responsibility in New York City, 38 WEEKLY COMP. PRES. DOC. 1158, 1160 (July 9, 2002).

<sup>15</sup> Members include the Chairman of the SEC, the Director of the FBI, the Secretary of the Treasury, high-level officials in the Department of Justice, and United States Attorneys from key urban areas. CORPORATE FRAUD TASK FORCE FIRST YEAR REPORT, *supra* note 12, at 1.2-1.3; CORPORATE FRAUD TASK FORCE, SECOND YEAR REPORT TO THE PRESIDENT 1.2-1.3 (2004), available at [http://www.usdoj.gov/dag/cftf/2nd\\_yr\\_fraud\\_report.pdf](http://www.usdoj.gov/dag/cftf/2nd_yr_fraud_report.pdf).

<sup>16</sup> CORPORATE FRAUD TASK FORCE FIRST YEAR REPORT, *supra* note 12, at 2.2 n.1.

members publicly profess to “have understood Congress’ clear mandate that they aggressively pursue obstructive conduct.”<sup>17</sup>

That understanding appears to have been actualized in several high-profile convictions. In June 2002, for instance, the accounting firm Arthur Andersen was convicted of obstruction of justice for destroying audit-related documents on the eve of an SEC investigation into its treatment of Enron’s special purpose entities.<sup>18</sup> Martha Stewart and her broker were convicted in March 2004 of obstruction, perjury, and lying to investigators in relation to Stewart’s fortuitous sale of ImClone stock on the eve of an unfavorable FDA announcement.<sup>19</sup> And in May 2004, investment banker Frank Quattrone was convicted of obstruction for urging subordinates to “clean up those files”<sup>20</sup> after learning that his firm was under grand jury investigation for its method of allocating shares in initial public offerings.<sup>21</sup> Regulators and prosecutors point to these and other cases as evidence that their toughened attitude is more than just talk.<sup>22</sup>

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<sup>17</sup> CORPORATE FRAUD TASK FORCE FIRST YEAR REPORT, *supra* note 12, at 2.8; *see also* Harvey L. Pitt, Chairman, U.S. Sec. & Exch. Comm’n, Remarks Before the U.S. Department of Justice Corporate Fraud Conference (Sept. 26, 2002), <http://www.sec.gov/news/speech/spch585.htm> (“Prosecutions for lying to the SEC, destroying documents under SEC subpoena, or otherwise seeking to illegally frustrate our investigations also yield huge programmatic benefits. They have a significant deterrent effect.”); Larry Thompson, Deputy Att’y Gen., U.S. Dep’t of Justice, Statement on the Arthur Andersen Verdict (June 15, 2002), [http://www.usdoj.gov/opa/pr/2002/June/02\\_dag\\_356.htm](http://www.usdoj.gov/opa/pr/2002/June/02_dag_356.htm) (“We will continue to vigorously pursue the obstruction of justice—a crime that undermines our justice system—where individuals or business organizations illegally interfere with the responsibilities of government investigators.”).

<sup>18</sup> *Arthur Andersen LLP v. United States*, 544 U.S. 696, 698–702 (2005) (detailing Andersen’s evidence destruction and its conviction under 18 U.S.C. § 1512(b) (2000); reversing and remanding for overbroad jury instructions).

<sup>19</sup> *United States v. Stewart*, 323 F. Supp. 2d 606, 609–10 (S.D.N.Y. 2004) (describing Martha Stewart’s conviction under 18 U.S.C. § 1001 for lying to investigators and 18 U.S.C. § 1505 for obstructing agency proceeding, her broker’s conviction under these two statutes and also under 18 U.S.C. § 1621 (perjury) for lying under oath to SEC investigator, and conviction of both Stewart and her broker for conspiring to do same).

<sup>20</sup> *United States v. Quattrone*, 441 F.3d 153, 165–66 (2d Cir. 2006) (describing Quattrone’s follow-up e-mail copying and endorsing his subordinate’s earlier e-mail, whose subject line was “[t]ime to clean up those files”).

<sup>21</sup> *Id.* at 169–81 (detailing factual basis for Quattrone’s conviction under 18 U.S.C. §§ 1503, 1505, and 1512(b), finding evidence sufficient to support finding on each count, but finding jury instructions erroneous and not harmless beyond reasonable doubt for failing to require that Quattrone acted with “corrupt” intention to impede SEC inquiry and grand jury proceeding).

<sup>22</sup> CORPORATE FRAUD TASK FORCE FIRST YEAR REPORT, *supra* note 12, at 2.8 (citing example of Quattrone conviction); Pitt, *supra* note 17. As one high-level Justice Department official put it:

[L]ying to government investigators, obstructing our investigations, should be understood as one of the surest paths to severe consequences. That message should be coming through loud and clear with the convictions of Martha

Such apparent shifts in the law's posture toward process crimes—and detection avoidance generally—have far outpaced our understanding of how the law ought to address such activities. This is more than just a catch-up problem for basic research. Conscientious practical policy discussions in this area inevitably lead to a series of foundational questions—questions for which scholarship would be the natural reference, but which it is largely unprepared to answer. Which forms of detection avoidance should be criminalized? How severe should sentences be? How vigorously should potential detection avoidance activity be investigated and prosecuted? Which forms of detection avoidance should be punished merely with procedural devices, like adverse jury instructions or burden shifting, rather than criminal penalties? Should the imposition of detection avoidance sanctions—whether criminal or procedural—require evidence of an underlying offense? How should investigators adjust the conduct of their investigation of the underlying offense upon encountering evidence of obstructive behavior? How, in general, should the law respond to the elemental problem of detection avoidance?

This Article has two objectives. The first is to help lay a foundation upon which questions such as these can be answered. The second is to begin to provide some answers. As a starting point, the Article focuses on but one of law's purposes, albeit one generally regarded to be among the most important: deterring underlying violations.<sup>23</sup> The

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Stewart and First Boston's Frank Quattrone in New York, and, of course, the conviction of the Arthur Andersen firm in the Enron investigation.

Christopher A. Wray, Assistant Att'y Gen., Criminal Div., U.S. Dep't of Justice, Remarks to the Association of Certified Fraud Examiners, Mid-South Chapter (Sept. 2, 2004), [http://www.usdoj.gov/criminal/press\\_room/speeches/2004\\_2954\\_rmks2CFC\\_TN090204.pdf](http://www.usdoj.gov/criminal/press_room/speeches/2004_2954_rmks2CFC_TN090204.pdf).

<sup>23</sup> See Steven D. Levitt & Thomas J. Miles, *Empirical Study of Criminal Punishment*, in HANDBOOK OF LAW AND ECONOMICS (A. Mitchell Polinsky & Steven Shavell, eds., forthcoming 2006) (manuscript at 1–2), available at <http://home.law.uiuc.edu/~pkeenand/documents/Levitt&Miles-Empirical%20Study.pdf> (reviewing empirical evidence and finding that “deterrence has a substantial but far from complete role in explaining observed patterns of criminal activity”); Gary T. Schwartz, *Reality in the Economic Analysis of Tort Law: Does Tort Law Really Deter?*, 42 UCLA L. REV. 377, 422–23 (1994) (finding sustainable view that current tort law does significantly deter in light of institutional detail and empirical studies, but discounting possibility of fine-tuning). But see Paul H. Robinson & John M. Darley, *Does Criminal Law Deter? A Behavioural Science Investigation*, 24 OXFORD J. LEGAL STUD. 173, 173, 197–204 (2004) (reviewing empirical evidence, finding no general, material ex ante effect from “the formulation of criminal law rules or even sentencing policies or practices,” but allowing possibility of such ex ante effects from “having a criminal justice system that administers punishment” and “changes in police practices or allocation of resources”) (emphasis removed). Deterrence is tempered by other important values, issues, and instruments—including retributive justice, social norms, social meaning, professional responsibility, political economy, and constraints on state power. See *infra* note 58. In the specific context of detection avoidance, such additional considerations are discussed in, for example, Stuart P. Green, *Uncovering the*

Article explores how this enterprise is affected by, and ought to be adjusted to account for, the effort that individuals exert to neutralize the threat of penalty.

The analysis in this Article is centered on a fundamental, though largely unexplored,<sup>24</sup> formula of law enforcement—the “detection avoidance principle.” Sanctioning a given species of violation not only discourages that violation, it also encourages those who still commit the violation to expend additional resources avoiding detection. The greater the penalty, that is, the more imperative the cover-up.<sup>25</sup> Raising the sentence on securities fraud, for instance, has the dual effect of deterring fraud and spurring the concealment of the fraud that is still perpetrated.

From a societal perspective, detection avoidance is deadweight loss.<sup>26</sup> Resources that firms expend structuring, following, and monitoring their document “retention” policies, for example, are resources diverted from innovation, production, and distribution. The best empirical evidence, reviewed in Part II, suggests that the social cost of detection avoidance is substantial—certainly relative to the social cost of detection, which plays such a decisive role in current enforcement

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*Cover-up Crimes*, 42 AM. CRIM. L. REV. 9, 28 (2005) (seeking to explain common moral perceptions regarding evidentiary foul play) and Daniel C. Richman & William J. Stuntz, *Al Capone's Revenge: An Essay on the Political Economy of Pretextual Prosecution*, 105 COLUM. L. REV. 583, 585–87 (2005) (criticizing “pretextual prosecution” for its tendency to muddy information content of convictions and thereby limit public’s ability to monitor prosecutors).

<sup>24</sup> Part I describes the vanishingly small role that this principle has played in the development of enforcement theory. Preliminary explorations of this principle include (in chronological order) Arun S. Malik, *Avoidance, Screening, and Optimum Enforcement*, 21 RAND J. ECON. 341, 341–42 (1990) (qualifying Professor Gary Becker’s conclusion, described in Part I.A, *infra*, that deterrence is most efficiently generated with large fines and small detection probabilities); C.Y. Cyrus Chu & Yingyi Qian, *Vicarious Liability Under a Negligence Rule*, 15 INT’L REV. L. & ECON. 305, 306 (1995) (analyzing how principal’s incentive to conceal evidence regarding her agent’s behavior affects efficiency of vicarious liability); Robert Innes, *Violator Avoidance Activities and Self-Reporting in Optimal Law Enforcement*, 17 J.L. ECON. & ORG. 239, 241 (2001) (analyzing detection avoidance in context of discounted sanctions for self-reporting); Albert Choi & Chris William Sanchirico, *Should Plaintiffs Win What Defendants Lose? Litigation Stakes, Litigation Effort, and the Benefits of Decoupling*, 33 J. LEGAL STUD. 323, 324–31 (2004) (exploring implications of defendants’ litigation effort for optimal “decoupling” of defendants’ liability and plaintiffs’ recovery).

<sup>25</sup> This Article focuses on the detection avoidance activities of those who are guilty of underlying violations. Sanctions may also induce the innocent to exert additional evidentiary effort to avoid wrongful prosecution and liability. Many of the same principles apply to such exertions, though on a smaller scale. Those who refrain from wrongdoing have in effect chosen that forbearance as their chief means of avoiding detection, whereas those who commit the wrongdoing have only the directly evidentiary variety of detection avoidance to shield them from punishment.

<sup>26</sup> Part III more fully describes the impact of detection avoidance on the social welfare calculus.

theory. The cost-effectiveness of an enforcement regime depends as much on the private detection avoidance spending that it inspires as on the public detection costs that it directly incurs.

What then can be done to lessen this wasteful by-product of sanctioning underlying violations? One possibility is to sanction detection avoidance as well. Such is apparently the first impulse of many lawmakers<sup>27</sup> and legal scholars.<sup>28</sup> And the logic is admittedly compelling. Sanctioning robbery discourages robbery. Why should perjury be any different?

But what this logic fails to take into account is that the detection avoidance principle applies as well to detection avoidance—that the principle is, in fact, fully recursive.<sup>29</sup> Just as hiking up sanctions on securities fraud encourages violators to exert more effort avoiding detection of their securities fraud, so hiking up sanctions on detection

<sup>27</sup> See *supra* notes 2–22 and accompanying text.

<sup>28</sup> See, e.g., JAMIE S. GORELICK ET AL., DESTRUCTION OF EVIDENCE § 3.1, at 66 (1989) (“Discovery sanctions provide the most comprehensive and flexible remedies for evidence destruction in civil litigation.”); Robert Cooter & Winand Emmons, *Truth-Bonding and Other Truth-Revealing Mechanisms for Courts*, 17 EUR. J.L. & ECON. 307, 308 (2004) (proposing that witnesses post bonds forfeited on later discovery of false testimony); Robert Cooter & Winand Emmons, *Truth-Revealing Mechanisms for Courts*, 159 J. INSTITUTIONAL & THEORETICAL ECON. 259, 260 (2003) (similar); Richard D. Friedman, *Dealing with Evidentiary Deficiency*, 18 CARDOZO L. REV. 1961, 1979–81 (1997) (describing when “public remedies” might be preferable to procedural and evidentiary sanctions or independent tort claims); Dale A. Nance, *Evidential Completeness and the Burden of Proof*, 49 HASTINGS L.J. 621, 621, 660–62 (1998) (advocating judge-centered responses to unreasonable evidentiary incompleteness); Charles R. Nesson, *Incentives to Spoliate Evidence in Civil Litigation: The Need for Vigorous Judicial Action*, 13 CARDOZO L. REV. 793, 806–07 (1991) (arguing for more vigorous enforcement of existing laws and rules against spoliation); Dale A. Oesterle, *A Private Litigant’s Remedies for an Opponent’s Inappropriate Destruction of Relevant Documents*, 61 TEX. L. REV. 1185, 1188 (1983) (advocating tightening laws against evidentiary foul play); Ariel Porat & Alex Stein, *Liability for Uncertainty: Making Evidential Damage Actionable*, 18 CARDOZO L. REV. 1891, 1895 (1997) (advocating recognition of spoliation tort); Chris William Sanchirico, *Evidence Tampering*, 53 DUKE L.J. 1223, 1295–99 (2004) [hereinafter Sanchirico, *Evidence Tampering*] (analyzing primary activity deterrence effect of sanctions on “evidence tampering” broadly defined); Lisa C. Harris, Note, *Perjury Defeats Justice*, 42 WAYNE L. REV. 1755, 1802–03 (1996) (advocating tougher stance toward perjury).

<sup>29</sup> Roughly speaking, a recursive formula is one whose output can be returned to the formula as an input. Biological reproduction is an example: Offspring can be parents themselves. For a helpful discussion of recursion and its role in linguistics, mathematics, and computer science see *Recursion*, in WIKIPEDIA, <http://en.wikipedia.org/wiki/Recursion> (last visited July 8, 2006). Recursion plays a role in other legal applications, including the theory of corruption and the theory of social norms. See, e.g., Kaushik Basu et al., *Notes on Bribery and the Control of Corruption*, 48 J. PUB. ECON. 349, 349–50 (1992) (examining infinite regress of bribery enforcement, as bribery apprehenders are bribed and, in turn, bribe their own apprehenders); Paul G. Mahoney & Chris William Sanchirico, *Norms, Repeated Games, and the Role of Law*, 91 CAL. L. REV. 1281, 1285–86 (2003) (describing cooperation-supporting social norm “def-for-dev,” recursive and “subgame perfect” alternative to “tit-for-tat”).

avoidance encourages detection avoiders to exert more effort avoiding detection of their detection avoidance. Sanctioning cover-up, that is, makes covering up the cover-up more imperative.

Can't we then also sanction cover-up of cover-up? Perhaps we can. But if it is fair to assume that cover-up once removed is something that the government can discern, sanction, and thereby discourage, then it is also fair to assume that violators can discern cover-up once removed as an activity that can itself be covered up. And it is therefore fair to conclude that the added sanction will inspire cover-up twice removed just as it inhibits cover-up once removed.

There is, of course, no logical end to this rhetorical see-you-and-raise-you. Every additional assertion that the state can also sanction the next order of cover-up, newly encouraged by the last order of sanctioning, is defeated by the retort that, in that case, the detection avoider will more strenuously cover up the next order of cover-up in response. True to its recursive nature, the detection avoidance principle, if prodded, unfolds in infinite regress.

Sanctioning all links in the chain simultaneously is no solution. Consider, for example, sanctioning detection avoidance uniformly without regard to whether it is of first-, second-, or tenth-order<sup>30</sup>—one hypothetical interpretation of perjury<sup>31</sup> and obstruction<sup>32</sup> statutes. Imagine further that the sanction for detection avoidance is the same as for the underlying violation. This sanctioning structure may actually encourage detection avoidance all told.<sup>33</sup> Discouraging detection

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<sup>30</sup> Throughout this Article, activity aimed at avoiding detection of the underlying crime is referred to as "first-order detection avoidance," while activity aimed at avoiding detection of first-order detection avoidance is termed "second-order detection avoidance," and so on. One could also conceive of the underlying violation as detection avoidance of order zero.

<sup>31</sup> *E.g.*, 18 U.S.C. §§ 1621, 1623 (2000).

<sup>32</sup> *E.g.*, 18 U.S.C. §§ 1503, 1512, 1515, 1519, 1520 (2000 & Supp. III 2005). There are several other sources of direct sanction. These include: (1) contempt, *e.g.*, 18 U.S.C. § 401 (2000), which may, for example, result from a party's failure to obey a court order, such as a motion to compel discovery, *e.g.*, FED. R. CIV. P. 37(b)(2)(D); (2) monetary sanctions under procedural rules in the form of payments by the party to the court or to the opponent, sometimes in the form of reimbursement for attorneys' fees, *e.g.*, FED. R. CIV. P. 37(b)(2) (authorizing court to "make such orders in regard to the failure [to comply with a discovery order] as are just" including explicitly payment of attorney's fees and presumably additional payments as well); (3) sanctions imposed by exercise of the court's "inherent power," *see, e.g.*, *Capellupo v. FMC Corp.*, 126 F.R.D. 545, 550-51, 553 (D. Minn. 1989) (document destruction sanctioned by requiring payment of twice other side's expenditures resulting therefrom).

<sup>33</sup> *See infra* Part V. As explained in Part IV.B, the existence of complementarities across orders of detection avoidance may partly or wholly counteract the degree to which a lower-order sanction encourages higher-order detection avoidance. But the technological approach also benefits from such complementarities, and the argument that the technological approach is more effective at reducing detection avoidance costs remains therefore

avoidance requires, in theory, that higher “orders” of detection avoidance are sanctioned more than lower. For any given order of detection avoidance, the higher-order sanction invited by the avoidance activity is its punishment, and the lower-order sanction avoided its reward. If the punishment is to exceed the reward, the higher-order sanction must exceed the lower. Thus, the cover-up should indeed be “worse” than the crime.<sup>34</sup> But what is more, the cover-up of the cover-up should be worse than the cover-up, and the cover-up of the cover-up of the cover-up should be worse than the cover-up of the cover-up, et cetera.

What theory requires of sanctioning, therefore, practical policy could never supply. Separating—in order to separately treat—different orders of detection avoidance is hardly feasible. How, after all, is the fact finder to tell cover-up of cover-up of cover-up from plain old cover-up of cover-up—especially when the detection avoider has an interest in making higher orders seem like lower?

Indeed, what the law in fact does with sanctions—some indication of what *is* practicable—is the opposite. Despite the order-neutral wording of perjury and obstruction statutes, the Federal Sentencing Guidelines suggest a lower sanction for higher orders of avoidance,<sup>35</sup> thus rewarding higher-order avoidance more than it is penalized. To similar effect are rules and practices that punish detection avoidance by increasing the chance of sanction for the underlying wrong—procedural devices like burden shifting,<sup>36</sup> adverse jury instructions,<sup>37</sup> or a

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valid. Regarding this point, see also, in addition to Part IV.B, the first clarifying remark at the end of this introduction and the first remark in note 157 regarding the impact of such complementarities on the technological approach.

<sup>34</sup> See, e.g., David Johnston, *Coverup: Watergate's Toughest Lesson*, N.Y. TIMES, Feb. 15, 1998, § 4, at 5 (“Watergate bequeathed many things to history, including this famous cliché: The cover-up is worse than the crime. Politicians haven’t necessarily absorbed this lesson, but the legal system has.”); Frank Rich, *We’re Not in Watergate Anymore*, N.Y. TIMES, July 10, 2005, § 4, at 12 (“[T]he most basic lesson of Watergate: [T]he cover-up is worse than the crime.”); William Safire, *One Blow for Truth*, N.Y. TIMES, Oct. 9, 1986, at A35 (“As usual in matters of state, the cover-up is worse than the crime.”); Henry Weinstein, *Martha Stewart Convicted: A Coverup Again Proves Worse than the Initial Act*, L.A. TIMES, Mar. 6, 2004, at C1 (“[Martha Stewart’s conviction] is another example of a person being trapped by their [sic] effort to conceal information that could show criminal conduct, rather than the conduct itself.” (quoting Professor Stephen Gillers)).

<sup>35</sup> See *infra* notes 131–32 and accompanying text.

<sup>36</sup> See, e.g., *Coleman (Parent) Holdings, Inc. v. Morgan Stanley & Co.*, No. CA 03-5045 AI, 2005 WL 674885, at \*5 (Fla. Cir. Ct. Mar. 23, 2005) (citing prior order that shifted burden of proof onto defendant as sanction for its stonewalling in discovery).

<sup>37</sup> See, e.g., *Lewy v. Remington Arms Co.*, 836 F.2d 1104, 1111–12 (8th Cir. 1988) (reviewing jury instruction suggesting that documents in possession of party but not provided upon request could be inferred to be damaging to that party’s case). Other examples of piggyback sanctions appear in FED. R. CIV. P. 37(b)(2)(A)–(C), (E), which provides that a court may take certain facts as given, refuse to hear certain claims or defenses, refuse to

policy of responding to obstructive behavior by intensifying investigation of the underlying violation.<sup>38</sup> To wit, an increase in the chance of suffering the underlying sanction—the punishment that these devices impose upon detection of first-order avoidance—is less of a punishment than the underlying sanction itself.

Thus, the detection avoidance principle—and specifically its recursivity—seriously hampers attempts to limit detection avoidance by threat of sanction. What then should be done to control this source of social waste?

This Article advocates shifting the locus of policy response toward the structural design of evidentiary procedure—the rules and practices that guide the normal course of investigation, interrogation, testimony, and, more generally, evidence production. As laid out in Parts VI and VII, the idea is to devise and amend these rules and practices to lower the productivity, from the avoider's perspective, of resources devoted to detection avoidance activities—that is, to lessen the rate at which the avoider is able to convert her input of effort and expenditure into the output of reductions in the probability of detection. By reducing the return on this investment, the law lessens the investment's attractiveness, and thereby reduces the quantity of resources that flow toward it. Thus, while the sanctioning approach attempts to discourage detection avoidance by taxing its detection, the approach advocated in this Article attempts to discourage detection avoidance by degrading the technology<sup>39</sup> of avoidance.

How can the rules and practices of evidentiary procedure be designed to reduce the productivity of detection avoidance? A truly comprehensive answer to this question lies beyond the bounds of a single article, especially one that must travel a fair distance to arrive at the point where such a question can be understandably posed. Nonetheless, the present Article does identify and describe one promising strategy for reducing the productivity of avoidance: exploiting and

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admit certain evidence, strike certain pleadings, stay or dismiss part or all of an action, or render a judgment by default.

<sup>38</sup> See, e.g., Charles M. Carberry & Harold K. Gordon, *To Prosecute or Not to Prosecute: Criminal Enforcement of Non-Fraud Provisions of the Fed. Securities Laws*, 4 BUS. CRIMES BULL. COMPLIANCE & LITIG. 1 (1997), available at <http://www.westlaw.com> (commercial electronic database requiring registration) (enter “4 No. 1 BUSCRIMB 1” in “Find by citation”) (“Securities crimes that include evidence of obstruction are . . . more likely to be prosecuted . . .”).

<sup>39</sup> This broad use of the term “technology” is borrowed from economic theory. It signifies the abstract functional relationship between inputs and outputs, and does not necessarily implicate modern science and engineering.

exacerbating the general human difficulties that limit the productivity of all human endeavor.<sup>40</sup>

Part VIII explains how the productivity of detection avoidance expenditure can be (and has been)<sup>41</sup> reduced by designing evidentiary process (inclusive of investigative techniques) to emphasize both the psychological limits of cognition and the sociological limits of cooperation.

On the psychological side, for example, the productivity of preparatory effort devoted to constructing a consistent and detailed fabrication is reduced by refusing private cognitive aids to the interrogated or deposed while protecting their private use by interrogators and deponents. On the sociological side, the destruction of documents becomes a less fruitful activity for litigants when employees and conspirators are induced to secretly retain their own copies on the chance that these will be useful bargaining chips in cutting separate deals with prosecutors.

Before moving on to the body of the Article and its more detailed account of the foregoing arguments, several points of clarification are in order.

The first concerns the precise location of the technological approach's advantage over sanctioning. The potential for confusion arises because, along many dimensions, increasing the sanction for detection avoidance and impeding its technology have similar effects. Compare, for example, a sanction on first-order detection avoidance with a reduction in the productivity of first-order avoidance. First, both measures draw on the public fisc. The technological approach is likely to increase the cost of the underlying investigation or adjudication. The sanctioning approach adds an additional layer of investigation and adjudication.<sup>42</sup> Second, both measures deter underlying violations. Each increases the cost of end-running the sanction for the underlying violation. Third, because both measures deter underlying violations, both also reduce first-order detection avoidance by those who are converted from noncompliance to compliance in the under-

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<sup>40</sup> Like any exercise of state power, the state's deployment of technological devices is susceptible to abuse. See, e.g., Kurt Eichenwald & Alexei Barrionuevo, *Tough Justice for Executives in Enron Era*, N.Y. TIMES, May 27, 2006, at A1 (describing prosecutors' tactics in recent white collar criminal cases and including expressions of concern from defense bar). The potential for abuse of state power is a serious problem. It is not, however, a problem that distinguishes the technological approach from the sanctioning approach. Indeed, the sanctioning approach will itself involve the deployment of many of the technological devices described *infra*.

<sup>41</sup> See *infra* note 143 and accompanying text.

<sup>42</sup> For more on the comparison of public costs, see Part VII.C, *infra*.

lying activity and so have less need to cover up. Fourth, both also directly reduce first-order detection avoidance—the technological approach by lowering its productivity, the sanctioning approach by increasing its legal cost.

The difference between increasing the sanction for detection avoidance and impeding its technology resides in the different behavior that these policies inspire from the inevitable group of agents who still choose to commit and cover up the underlying violation. A sanction on first-order detection avoidance, imposed upon detection of that activity, gives these agents an additional impetus to avoid detection of their first-order detection avoidance. It thus encourages additional second-order detection avoidance at the same time that it discourages first-order. The technological approach, on the other hand, has no such by-product. It conditions no penalty on detection of first-order detection avoidance. It, therefore, produces no additional incentive to engage in second-order avoidance. Because of this difference, reducing the technological productivity of first-order avoidance is a more cost-effective method of shoring up deterrence than sanctioning first-order avoidance.

Second, it is important to keep in mind that the technological approach is not simply a matter of making detection avoidance harder. That, with no more, runs the risk that detection avoiders will respond by *trying* harder, and the result will be more, rather than less, social waste. Part VII describes which class of technological alterations do reduce detection avoidance and which do not. In brief, the key is to lower the marginal productivity of detection avoidance activities. Merely raising the marginal cost of avoiding detection—something less than lowering its marginal productivity—is insufficient.

Third, in advocating the technological approach to detection avoidance, this Article is not also arguing for the elimination of sanctions on detection avoidance. Rather, this Article is arguing that the mix of sanctioning and technological approaches for detection avoidance, relative to the mix for, say, theft, should be tilted toward the technological approach and away from the sanctioning approach. The reasoning, as explained above, rests on the unique inefficacy of sanctioning when it comes to detection avoidance.

In the same vein, this Article further argues that a tilt toward the technological approach should also characterize any attempt to intensify the law's attack on detection avoidance.<sup>43</sup> Policy makers should

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<sup>43</sup> One might conclude from recent press accounts and policy statements that present conditions call for some such additional action. See *supra* notes 2–22 and accompanying text.

not automatically assume that the proper response to an intolerable increase in evidentiary foul play is to hike up sanctions on perjury and obstruction. They should rather consider that the scarce resources of the public fisc might be more effectively dedicated to buttressing those structural aspects of legal process that reduce the return on the detection avoidance dollar. This latter avenue holds out the possibility that society can shore up deterrence of underlying violations without eliciting additional, wasteful evidentiary misdeeds of the second, third, and higher orders from the inevitable group of agents who continue to commit the underlying violations.

The remainder of the Article is organized as follows. Part I describes the conventional theory of public enforcement and its lopsided emphasis on detection to the exclusion of detection avoidance. Part II argues that detection avoidance activities are important in practice, despite their neglect in accepted theory. Part III proposes an expanded framework incorporating the impact of avoidance activities on the cost-effectiveness of law enforcement.<sup>44</sup> Parts IV and V explore the relative inefficacy of sanctions in controlling detection avoidance. Parts VI–VIII describe and argue for the alternative technological approach, identifying its quiet prevalence in the law.

## I

### DETECTION AVOIDANCE AND NEOCLASSICAL ENFORCEMENT THEORY

Though at the hub of practical policy considerations, detection avoidance lies, on the scholarly map, somewhere in the no-man's-land between evidentiary procedure and public enforcement theory—a position that may help explain why there is systematic neglect where there should be systematic analysis. In attempting to remedy the situation, one could take several approaches, expanding from either disciplinary border or from both at once. The approach taken in this Article is to start on the side of public enforcement theory, broadening it toward evidentiary procedure. Accordingly, this Part begins by identifying the core components of the predominant approach to public enforcement with particular attention to its inattention to detection avoidance.<sup>45</sup> Part III lays out a broader approach to public enforcement, to be applied throughout the Article.

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<sup>44</sup> A formal model tracking many of the arguments in this Article is available at [http://www.cstone.net/~csanchir/Sanchirico\\_Avoidance\\_App\\_2005.pdf](http://www.cstone.net/~csanchir/Sanchirico_Avoidance_App_2005.pdf).

<sup>45</sup> Earlier work by this author describes the relative dearth of research on detection avoidance within the field of evidentiary procedure, as opposed to public enforcement theory. See Chris William Sanchirico, *Evidence, Procedure, and the Upside of Cognitive Error*, 57 STAN. L. REV. 291, 294 n.10, 298, 301–05, 302 n.40 (2004) [hereinafter Sanchirico,

### A. Elements of the Neoclassical Approach

The “neoclassical” approach to public enforcement builds on the “classical” model of crime laid out by Beccaria, Bentham, and others in the late eighteenth century.<sup>46</sup> Those ancient roots were revived, formalized, and extended by Nobel laureate economist Gary Becker in 1968.<sup>47</sup> In the nearly four decades since then, the neoclassical approach to public enforcement has constituted one of the most extensively farmed fields in law and economics.<sup>48</sup> Such sustained attention has produced diverse incarnations and a wide array of implications,<sup>49</sup> a multiformity not always recognized by critics.

It is fair to say, however, that two components of the neoclassical approach remain constant and essential. First is its account of the basic “machinery” of deterrence, and second is its description of the cost-benefit analysis that ought to be conducted in making policy choices regarding public enforcement.

Regarding the first component, the deterrent force exerted by law is viewed as the conjunction of two factors: the probability that violations are “detected” (i.e., investigated, uncovered, and successfully prosecuted) and the magnitude of the sanction imposed in the event of detection.<sup>50</sup> Thus, the potential wrongdoer, in deciding

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*Upside of Cognitive Error*] (describing and critiquing scholarship’s relative inattention to Holmesian “bad actor” of evidentiary process); Sanchirico, *Evidence Tampering*, *supra* note 28, at 1219 (“[E]vidence tampering [broadly defined] has been something of a Medusa in evidence scholarship.”). See *supra* note 28 for some exceptions to this general inattention.

<sup>46</sup> Cesare Beccaria, *Of Crimes and Punishments*, in ALESSANDRO MANZONI, THE COLUMN OF INFAMY PREFACED BY CESARE BECCARIA’S OF CRIMES AND PUNISHMENTS (Kenelm Foster & Jane Grigson trans., Oxford Univ. Press 1964) (1764); JEREMY BENTHAM, AN INTRODUCTION TO THE PRINCIPLES OF MORALS AND LEGISLATION 158–59 (J.H. Burns & H.L.A. Hart eds., Athlone Press 1970) (1789).

<sup>47</sup> Gary S. Becker, *Crime and Punishment: An Economic Approach*, 76 J. POL. ECON. 169 (1968).

<sup>48</sup> A number of excellent surveys catalogue developments since Becker. See, e.g., Nuno Garoupa, *The Theory of Optimal Law Enforcement*, 11 J. ECON. SURVEYS 267, 267–68 (1997) (surveying modern public enforcement theory); A. Mitchell Polinsky & Steven Shavell, *The Theory of Public Enforcement of Law*, in HANDBOOK OF LAW AND ECONOMICS (A. Mitchell Polinsky & Steven Shavell eds., forthcoming 2006) (manuscript at 3–4), available at <http://ssrn.com/abstract=850264> [hereinafter Polinsky & Shavell, *Handbook Chapter*] (similar); see also Luigi Alberto Franzoni, *Tax Evasion and Tax Compliance*, 4 ENCYCLOPEDIA OF LAW AND ECONOMICS 52, 52–53 (Boudewijn Bouckaert & Gerrit de Geest eds., 2000) (surveying application of Becker’s model to tax enforcement).

<sup>49</sup> See, e.g., Garoupa, *supra* note 48, at 268 (noting scholarship’s application of Becker’s model to “a variety of aspects of criminal law and law enforcement”); Polinsky & Shavell, *Handbook Chapter*, *supra* note 48 (manuscript at 3) (noting that after Becker, “several hundred articles have been written on the economics of law enforcement”).

<sup>50</sup> Becker, *supra* note 47, at 177. If one accounts for the possibility of false positives, the detection probability is replaced by the *difference* between the probability of (correct) detection given illegal behavior and the probability of (incorrect) detection given *legal*

whether to misreport her firm's earnings, cheat on her taxes, or rob her local convenience store, weighs her perception of the private gain from the activity against her perception of both the chance that she will be caught and the consequences if she is.

This basic machinery of deterrence can be configured in many ways. The size of the sanction, the nature of the sanction, and the frequency of detection, for example, are all subject to policy choice. The second essential component of the neoclassical approach is its description of the cost-benefit analysis that ought to be conducted in making these policy choices.

The social benefits of deterrence are taken to be the benefits of reduced violations, including the benefits to those who would otherwise be victimized. The costs are typically parsed into two categories, corresponding to the two factors in the neoclassical approach to deterrence mechanics. First are "detection costs," the publicly incurred cost of investigating and prosecuting violations, as manifest in budgeting for regulatory enforcement divisions, police departments, and court systems. Second are "sanctioning costs," the cost of imposing sanctions when violations lead to conviction or liability, including, for example, the operating costs and opportunity costs of keeping convicts in prison.<sup>51</sup>

Becker's famous prescription for efficient enforcement is one example of the kind of policy recommendation that follows from combining these two components.<sup>52</sup> A monetary fine, he explains, is merely a transfer of resources from the offender to the government, which may in turn transfer the resources back to citizens in the form of spending increases or tax reductions. The social pie being no smaller for this redistribution of slices, raising the fine is a virtually costless means of generating additional deterrence. Other forms of

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behavior—in other words, the degree to which illegal behavior increases the chance of punishment. A. Mitchell Polinsky & Steven Shavell, *Legal Error, Litigation, and the Incentive to Obey the Law*, 5 J.L. ECON. & ORG. 99, 100 (1989).

<sup>51</sup> The cost of precautions taken by private citizens—alarm systems, private security guards—constitutes a third category of cost. See, e.g., Ian Ayres & Steven D. Levitt, *Measuring Positive Externalities from Unobservable Victim Precautions: An Empirical Analysis of Lojack*, 113 Q.J. ECON. 43, 43–44 (1998) (noting magnitude of private expenditure on precautions and resulting potential externalities); Becker, *supra* note 47, at 171, 200–01 (noting this category of expenditure); Omri Ben-Shahar & Alon Harel, *Blaming the Victim: Optimal Incentives for Private Precautions Against Crime*, 11 J.L. ECON. & ORG. 434, 435–36 (1995) (proposing mechanism to induce optimal level of private precaution); Charles T. Clotfelter, *Private Security and the Public Safety*, 5 J. URB. ECON. 388, 389–91 (1978) (exploring causal relationship between crime and private precaution); Steven Shavell, *Individual Precautions to Prevent Theft: Private Versus Socially Optimal Behavior*, 11 INT'L REV. L. & ECON. 123, 126 (1991) (arguing that individuals may have motives to engage in nonoptimal levels of private precaution).

<sup>52</sup> Becker, *supra* note 47, at 180–85, 191–94.

sanction, such as imprisonment, consume social resources, positively reducing the size of the pie.<sup>53</sup> Likewise, increasing the chance that violations are detected diverts labor and capital toward investigation and prosecution and away from productive activities.<sup>54</sup> Best then to lower detection effort, only rarely catching offenders, and to compensate by imposing large fines upon those few who are caught.<sup>55</sup>

Qualifying Becker's prescription has been one of the chief tasks of neoclassical enforcement theory in Becker's wake.<sup>56</sup> As a result, the prescription survives as more of an important theoretical baseline than a practical policy recommendation. Nevertheless, the general framework within which Becker made his finding—the basic detect-and-sanction mechanic that he deployed and the particular social cost categories that he chose to tally—continues to predominate.<sup>57</sup>

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<sup>53</sup> *Id.* at 180.

<sup>54</sup> *Id.* at 180–84.

<sup>55</sup> *Id.* at 193. Becker also finds that even if the sanction is socially costly to impose (contrary to the monetary fines considered in this paragraph), it will still be efficient to increase the sanction and lower the detection probability if the social cost elasticity of sanctions is no greater than one. *Id.* at 181–83. A special case of this elasticity condition is where the cost of the sanction is a fixed multiple of the level of the sanction. A special case of *this* is where the social cost of the sanction is zero, as where the sanction is a pure monetary transfer. *Id.* (assuming proportional costs).

<sup>56</sup> See, e.g., Lucian Arye Bebchuk & Louis Kaplow, *Optimal Sanctions and Differences in Individuals' Likelihood of Avoiding Detection*, 13 INT'L REV. L. & ECON. 217, 218 (1993) (finding that lowering fine and perhaps raising detection probability facilitates imposition of effectively separate expected sanctions according to individuals' heterogeneous ability to avoid detection, thus preventing over- or underdeterrence); Lucian Arye Bebchuk & Louis Kaplow, *Optimal Sanctions When Individuals Are Imperfectly Informed About the Probability of Apprehension*, 21 J. LEGAL STUD. 365, 366–67 (1992) (finding that increasing sanction multiplies effect of individuals' errors in judging probability of detection and thus exacerbates over- and underdeterrence); Dan M. Kahan, *Social Influence, Social Meaning, and Deterrence*, 83 VA. L. REV. 349, 351–52 (1997) (noting that on standard view, "it may sometimes seem efficient to rely more heavily on a severe penalty than on a high probability of conviction . . . [b]ut if individuals infer widespread criminality from a low probability of apprehension, the power of social influence could more than offset any efficiency gains from this tradeoff"); Louis Kaplow, *The Optimal Probability and Magnitude of Fines for Acts That Definitely Are Undesirable*, 12 INT'L REV. L. & ECON. 3, 3 (1992) (extending approach of Polinsky and Shavell *infra* to show how presence of offender risk-bearing costs may raise optimal level of deterrence); A. Mitchell Polinsky & Steven Shavell, *The Optimal Tradeoff Between the Probability and Magnitude of Fines*, 69 AM. ECON. REV. 880, 880–81 (1979) (incorporating additional risk-bearing costs borne by risk-averse offenders when sanctions are increased); George J. Stigler, *The Optimum Enforcement of Laws*, 78 J. POL. ECON. 526, 527–28 (1970) (focusing on cross-offense incentives and maintaining that if all fines are set to same maximum level, offenders will choose serious rather than minor offenses, at least if detection probabilities cannot be appropriately adjusted across offenses).

<sup>57</sup> See Garoupa, *supra* note 48, at 267–68 (noting influence of Becker's work); Polinsky & Shavell, *Handbook Chapter, supra* note 48 (manuscript at 3) (same).

### B. *Where's the Mouse?*

Many scholars have raised important foundational questions about the core components of the neoclassical approach.<sup>58</sup> It would seem difficult to argue, however, that the approach does not successfully accomplish what it sets out to do—that it is not, in other words, a sufficiently thorough and systematic treatment of both deterrence mechanics and the attendant social cost accounting.

But that is what is argued here. For almost without exception, neoclassical enforcement theory depicts the detection of violations as a one-sided affair. The state as *detector* decides how much to invest in apprehension, and the more it invests, the more likely it is to successfully detect violations. The *detected* has no active role in the story.

Yet listen a moment to the informed impressions of litigators<sup>59</sup> and judges,<sup>60</sup> skim a few administrative policy pronounce-

<sup>58</sup> See, e.g., MICHAEL MOORE, *PLACING BLAME: A GENERAL THEORY OF THE CRIMINAL LAW* 78–79 (1997) (seminally advancing retributive approach to criminal law); Kahan, *supra* note 56, at 351–52 (critiquing classic paradigm's neglect of law's role in influencing social norms as well as its interaction with individuals' own expression of character and values); Robinson & Darley, *supra* note 23, at 174–97 (2004) (critiquing cognitive premises of classic deterrence paradigm, including potential offenders' knowledge of law, their correct perception of costs and benefits, and their ability to decide rationally); Chris William Sanchirico, *Deconstructing the New Efficiency Rationale*, 86 CORNELL L. REV. 1003, 1006–14 (2001) (critiquing premise that legal rules should be set solely on basis of aggregate social costs and benefits without regard to how those are distributed).

<sup>59</sup> See, e.g., GORELICK ET AL., *supra* note 28, at ix (“[M]any litigators privately confided to us that, at some point in their careers, they suspected or were confronted with the fact that documents were deliberately destroyed . . . Public confirmation . . . was not hard to find.”); MARGARET M. KOESEL ET AL., *SPOILIATION OF EVIDENCE: SANCTIONS AND REMEDIES FOR DESTRUCTION OF EVIDENCE IN CIVIL LITIGATION* xi (Daniel F. Gourash ed., 2000) (“Spoliation of evidence is an unfortunate reality of modern-day civil litigation.”); John H. Beckstrom, *Destruction of Documents with Federal Antitrust Significance*, 61 Nw. U. L. REV. 687, 715 (1966) (“[W]illful document destruction in antitrust settings has been revealed in a number of cases, and . . . it is reasonable to speculate that, as with an iceberg, this is only a sample of what is below the surface.”); Steven M. Cohen, *What Is True? Perspectives of a Former Prosecutor*, 23 CARDOZO L. REV. 817, 820–22 (2002) (arguing as former Assistant U.S. Attorney that cooperating witnesses have strong incentives to lie to police); Mark Curriden, *The Lies Have It*, A.B.A. J., May 1995, at 68, 70 (quoting Milwaukee prosecutor E. Michael McCann, former chair of ABA Section of Criminal Justice as saying, “[i]f perjury were water, the people in civil court would be drowning”); Edward J. Imwinkelried, *A New Antidote for an Opponent's Pretrial Discovery Misconduct: Treating the Misconduct at Trial as an Admission by Conduct of the Weakness of the Opponent's Case*, 1993 BYU L. REV. 793, 794 (“The general consensus is that misconduct is widespread during discovery.”); Scott D. Michel, *Document Destruction in Tax Matters*, in GORELICK ET AL., *supra* note 28, at 381, 381 (“Persons under investigation for tax violations often . . . panic and take steps to ‘fix’ the case against them by [evidence tampering].”); Nesson, *supra* note 28, at 793 (“Interviews and surveys of litigators suggest [that spoliation is] a prevalent practice.”); Oesterle, *supra* note 28, at 1186 (“The naked truth is that many corporations purposefully operate programs to destroy evidence.”); H.

ments,<sup>61</sup> go so far as to examine what systematic data exists,<sup>62</sup> or just

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Richard Uviller, *Credence, Character, and the Rules of Evidence: Seeing Through the Liar's Tale*, 42 DUKE L.J. 776, 813 (1993) ("All guilty defendants who choose to testify will lie on the stand about anything that might improve their chances and about which they imagine they can be persuasive."); Harris, *supra* note 28, at 1777 ("[P]erjury in the courtrooms continues to skyrocket seemingly out of control."); Laura Mansnerus, *Lying Rampant in Civil Suits but Prison for Lying Is Rare*, N.Y. TIMES, Feb. 22, 1998, § 1, at 22 ("[L]egal experts agree that in ordinary civil suits, lying is rampant . . ."). Special Counsel Patrick Fitzgerald recently stated:

We, as prosecutors and FBI agents, have to deal with false statements, obstruction of justice and perjury all the time. The Department of Justice charges those statutes all the time. When I was in New York working as a prosecutor, we brought those cases . . . In Philadelphia . . . they prosecute false statements and obstruction of justice. When I got to Chicago, I knew the people before me had prosecuted false statements, obstruction and perjury cases. And we do it all the time. And if a truck driver pays a bribe or someone else does something where they go into a grand jury afterward and lie about it, they get indicted all the time.

Patrick Fitzgerald, Special Counsel, U.S. Dep't of Justice, Transcript of Press Conference (Oct. 28, 2005), <http://www.washingtonpost.com/wp-dyn/content/article/2005/10/28/AR2005102801340.html> (announcing indictment of Lewis Libby).

<sup>60</sup> See, e.g., RICHARD A. POSNER, AN AFFAIR OF STATE: THE INVESTIGATION, IMPEACHMENT, AND TRIAL OF PRESIDENT CLINTON 147 (1999) ("It is not unusual for one judge to say to another that he or she has just presided at a trial at which several of the witnesses were obviously lying . . ."); Curriden, *supra* note 59, at 69 (quoting Federal District Judge Marvin H. Shoob as saying that "people would be shocked if it were truly known how many witnesses lied under oath in a court of law every day"); *id.* at 70 (quoting prominent trial judge as saying that perjury "is so widespread and pervasive that it has become a major concern among trial judges"); *id.* at 72 (quoting state trial judge as saying that "there is an element out there beginning to realize that you can walk into court, take the oath, lie up a storm, and not have to worry about being punished for it, even if you are caught").

<sup>61</sup> See *supra* notes 12–17 and accompanying text (discussing Corporate Fraud Task Force).

<sup>62</sup> Richard O. Arther & John E. Reid, *Utilizing the Lie Detector Technique to Determine the Truth in Disputed Paternity Cases*, 45 J. CRIM. L. CRIMINOLOGY & POLICE SCI. 213, 214–15 (1954) (finding that over eighty percent of parties in large sample of paternity suits admitted after trial that they lied under oath when subsequently confronted with lie detector test); Alan R. Beckenstein & H. Landis Gabel, *Antitrust Compliance: Results of a Survey of Legal Opinion*, 51 ANTITRUST L.J. 459, 493 (1982) (finding that more than half of survey respondents say that they often or always encounter "policies that reduce historical records"); Wayne D. Brazil, *Civil Discovery: Lawyers' Views of Its Effectiveness, Its Principal Problems and Abuses*, 1980 AM. B. FOUND. RES. J. 787, 829 (concluding based on survey data that it is "difficult to exaggerate the pervasiveness of evasive practices or their adverse impact on the efficiency and effectiveness (for information distribution) of civil discovery" and that "[e]vasion infects every kind of litigation and frustrates lawyers in every kind of practice"); *id.* at 838 (finding that surveyed litigators believed "lack of candor or bad faith by [the] opposing party or attorney" impeded discovery in fourteen percent of their cases on average); Samuel R. Gross et al., *Exonerations in the United States 1989 Through 2003*, 95 J. CRIM. L. & CRIMINOLOGY 523, 551 (2005) (studying more than 340 criminal exonerations from 1989 to 2003, finding most from rape and murder convictions, and stating that "[f]or murder, the leading cause of the false convictions we know about is perjury—including perjury by supposed participants or eyewitnesses to the crime who knew the innocent defendants in advance"); Steven D. Pepe, Standards of Legal Negotia-

glance at the occasional newspaper headline,<sup>63</sup> and it becomes difficult to avoid the conclusion that violators are more than mere spectators. Just as the state invests in detecting their violations, they invest in avoiding that detection. They lie, they shred, they bribe. They refrain from taking notes. They go out of their way to communicate only orally, in person, in private. They wear gloves and masks. They work under cover of darkness. They open foreign bank accounts. They form offshore entities. They launder tainted money. They launder bloody socks.

The investigation and prosecution of crimes and regulatory violations is not, in fact, an exercise in orienteering. It is a chase, consisting of a pursuit *and* a flight.

Amidst the numerous contributions to neoclassical theory spanning several decades and several fields of legal studies, this fundamental fact is rarely acknowledged. One of the only systematic accounts is provided by Professor Arun Malik, who recognizes that detection avoidance costs provide yet another qualification to Becker's prescription that fines should be large and detection probabilities small.<sup>64</sup> Raising the fine may not incur the expenditure of additional public resources on detection, as Becker pointed out. But, says Malik, it most definitely inspires the expenditure of additional *private* resources on detection *avoidance*, especially among those who remain undeterred.<sup>65</sup> To raise the fine is to increase the pain of detection and, therefore, to increase the relief from avoiding it. Were the fine \$100,000, reducing the chance of detection by one

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tions: Interim Report and Preliminary Findings 3 (1983) (unpublished manuscript, on file with the *New York University Law Review*) (finding that approximately fifty percent of surveyed litigators view "unfair" or "inadequate" disclosure as either frequent or regular problem); Steven D. Pepe, Summary of Selected Findings of the Study on the Standards of Legal Negotiations 16 (date unknown) (unpublished manuscript, on file with the *New York University Law Review*) (same). *But see* Sanchirico, *Evidence Tampering*, *supra* note 28, at 1231-39 (critiquing all of these studies besides Gross, *supra*, and their use in legal scholarship).

<sup>63</sup> *See, e.g., supra* notes 18-22 and accompanying text (discussing Andersen, Stewart, and Quattrone cases).

<sup>64</sup> Malik, *supra* note 24, at 342-48 (formally proving this caveat in Proposition 1(iii)). Professor Samuel Buell pointed out to me that Beccaria, one of the founders of the classical approach mentioned above, anticipated Malik's contribution. *See* Beccaria, *supra* note 46, at 43-44 ("The worse the ill that confronts them, the more men are driven to evade it. The very savagery of a punishment has this effect, and to avoid the penalty for the one crime they have already committed, men commit other crimes.").

<sup>65</sup> Malik, *supra* note 24, at 342.

percentage point would be worth \$1000.<sup>66</sup> Doubling the fine to \$200,000 doubles that value to \$2000.

Malik does little to develop the point beyond providing this additional caveat to Becker.<sup>67</sup> He does not consider policies that attempt to deter detection avoidance itself—the subject of this Article.<sup>68</sup> He does not recognize the recursivity of the detection avoidance principle, the focus of Parts IV–V. And he does not examine the potential for structuring detection activities to reduce the productivity of detection avoidance, the focus of Part VI.<sup>69</sup> Of course, none of this was incumbent upon Malik himself, who deserves credit for raising an important and neglected issue. The real problem is that the otherwise well-developed body of literature that has followed in the decade and a half since Malik has also declined to develop his initial insight, relegating it to the occasional footnote. For the most part, neoclassical enforcement theory has continued to ignore detection avoidance,<sup>70</sup> even as it strenuously refines and extends its one-sided approach.<sup>71</sup>

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<sup>66</sup> Throughout the rest of the Article it will be assumed in all numerical examples that the violator is risk neutral. We will also speak of percentage point changes as if there were greater precision than there actually is. Both practices are purely for ease of exposition.

<sup>67</sup> *But see infra* note 107 (describing ancillary results in Malik's article).

<sup>68</sup> This may explain the rather limited set of examples of detection avoidance that Malik provides—the use of radar detectors and lobbying for lax enforcement of environmental regulations—neither of which are per se sanctionable. Malik, *supra* note 24, at 342.

<sup>69</sup> Malik explicitly assumes that state policy has no effect on the productivity of detection avoidance. Malik, *supra* note 24, at 343 (assuming relevant cross derivative to be zero in equation (5) and surrounding text).

<sup>70</sup> *See, e.g.*, A. Mitchell Polinsky & Steven Shavell, *The Economic Theory of Public Enforcement of Law*, 38 J. ECON. LITERATURE 45, 49 (2000) (surveying enforcement theory and citing Malik's article in passing without discussion of its content); Polinsky & Shavell, *Handbook Chapter*, *supra* note 48 (manuscript at 14) (same). *But see* Garoupa, *supra* note 48, at 285–86 (surveying public enforcement theory and presenting Malik's caveat as formal proposition). Lexis and Westlaw searches indicate that Malik's article has been cited in only a handful of law review articles, and always only in passing. Half of these citing articles are by the same author. Among the very few articles outside the law review literature that account for detection avoidance activities are Chu & Qian, *supra* note 24, at 306 (questioning efficiency of vicarious liability in light of principal's incentive to conceal evidence of her agent's misdeeds), Innes, *supra* note 24, at 241 (arguing that self-reporting regime can lower detection avoidance costs without compromising deterrence, if sanctions on self-reported violations are set equal to violator's total effective sanction, including detection avoidance costs), and Choi & Sanchirico, *supra* note 24, at 326–29 (arguing that defendant's litigation effort, akin to detection avoidance costs, reverses usual optimality of “decoupling” of defendants' liability and plaintiffs' recovery in high stakes cases with deep pocket defendants).

<sup>71</sup> Somewhat related to the problem of detection avoidance is the literature on self-reporting of violations, including in part: Jennifer Arlen, *The Potentially Perverse Effects of Corporate Criminal Liability*, 23 J. LEGAL STUD. 833, 835–37 (1994) (analyzing problem of vicarious corporate criminal liability and incentive to monitor employees, and advocating conditioning fines on monitoring effort); Jennifer Arlen & Reinier Kraakman, *Controlling Corporate Misconduct: An Analysis of Corporate Liability Regimes*, 72 N.Y.U. L. REV.

## II

THE EMPIRICAL IMPORTANCE OF DETECTION  
AVOIDANCE COSTS

This Part rejects the claim that the social costs of detection avoidance are negligible in practice and therefore justifiably ignored. The counterargument proceeds simultaneously in two modes. The first addresses the significance of these costs directly, arguing that they are indeed substantial in an absolute sense, aside from comparison with other relevant costs.

The second mode of argument is a form of estoppel. The conventional enforcement paradigm relies heavily on the significance of the public cost of detection. Were *that* cost taken as negligible, most of the findings in the literature would be upturned—Becker's prescription of high fines and low detection probabilities is not unique in this regard. But the social cost of detection *avoidance* parallels that of detection. Just as the public consumes social resources detecting violations, the offender consumes social resources avoiding detection. The state uncovers, the offender covers up.

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687, 694–95 (1997) (extending Arlen's model to problem of inducing firms to monitor employee activities that may have harmful environmental consequences, and also considering duty-based regimes and self-reporting); Robert Innes, *Self-Policing and Optimal Law Enforcement When Violator Remediation Is Valuable*, 7 J. POL. ECON. 1305, 1307–08 (1999) (emphasizing problem that firms have insufficient incentive to remedy violations unless and until those violations are detected by regulator, and proposing making fines contingent on firm's pre-detection remediation costs); Louis Kaplow & Steven Shavell, *Optimal Law Enforcement with Self-Reporting of Behavior*, 102 J. POL. ECON. 583, 584–85 (1994) (arguing that self-reporting can lower both enforcement costs and risk-bearing costs); and Alexander S.P. Pfaff & Chris William Sanchirico, *Environmental Self-Auditing: Setting the Proper Incentives for Discovery and Correction of Environmental Harm*, 16 J.L. ECON. & ORG. 189, 190–91 (2000) (analyzing problem of optimally inducing firms to investigate their own potential violations given positive impact of such investigation on chance such violations will be detected).

One might argue that the literature on self-disclosure is evidence of a general concern within enforcement theory for individual actions that affect the probability of detection (self-disclosure *increases* it), and that the existence of this literature ought to thereby temper claims regarding the dearth of research on the role of violators in enforcement theory. Yet the existence of this extensive literature on what agents do to *invite* detection, when juxtaposed with the virtual nonexistence of a literature on what individuals do to *avoid* detection, may actually reinforce the point that the literature on enforcement is out of balance.

Of course, the activities of aiding detection and avoiding detection are not entirely disconnected. One generally does not engage in both at the same time. To encourage self-disclosure is thus also to discourage detection avoidance. Yet the literature on self-disclosure does not generally recognize this point, focusing instead on the capacity of self-disclosure to save on the *public* cost of detection, rather than the private cost of detection avoidance. Innes, in directly studying how encouraging self-disclosure can reduce detection avoidance costs, is an important exception to this generalization. Innes, *supra* note 24, at 241. Yet even Innes's analysis is incomplete, as discussed in note 107, *infra*.

Indeed, the state's pursuit of violations is costly largely because, and to the extent that, the offender incurs costs in the flight. Detecting violations requires the expenditure of public resources commensurate with the offender's counterbalancing expenditure in avoiding detection. If culprits turned themselves in, if taxpayers noted on their returns how they had understated their income, detection would be virtually cost-free. The cat would burn few calories but for the calories burned by the mouse.

The remainder of this Part supports these claims with a more detailed analysis of the nature and extent of detection avoidance costs. Although systematic empirical evidence on the relative cost of detection avoidance is hard to come by,<sup>72</sup> the best evidence available strongly suggests that detection avoidance costs are worth attending to in policy analysis.

### A. *The Andersen Briefs*

Lawyers often bat around the term "zealous advocacy" with little indication of where precisely they would locate the foul line between legal and illegal (not to mention the line between ethical and unethical). And in general lawyers and their clients have little reason to be specific.

Yet the *Arthur Andersen* case,<sup>73</sup> as it rose to the U.S. Supreme Court from the courts below, staked out a border that apparently left many lawyers standing in foul territory. As a result, the case flushed out some surprisingly candid claims regarding the ubiquity of various detection avoidance activities. Reading these briefs, one is tempted to conclude that avoiding detection is the daily task of the entire defense bar.

According to the amicus brief of the National Association of Criminal Defense Lawyers (NACDL),<sup>74</sup> the Fifth Circuit's reading of the obstruction statute in *Arthur Andersen*<sup>75</sup> made it criminal to impede a government investigation. The NACDL reacted to this as if they were the National Association of Bakers and the Fifth Circuit had interpreted the law to prohibit mixing flour and water. "Impede government investigations?" was the plea. "That's what we do." The

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<sup>72</sup> See Sanchirico, *Evidence Tampering*, *supra* note 28, at 1231–39 (reviewing empirical evidence on prevalence of evidentiary foul play).

<sup>73</sup> *Arthur Andersen LLP v. United States*, 544 U.S. 696 (2005).

<sup>74</sup> Brief of Amicus Curiae Nat'l Ass'n of Criminal Def. Lawyers in Support of Petitioner at 1–3, *Arthur Andersen*, 544 U.S. 696 (No. 04-368), 2005 WL 435903, at \*1–3 [hereinafter NACDL Brief].

<sup>75</sup> *Arthur Andersen LLP v. United States*, 374 F.3d 281, 296–97 (5th Cir. 2004) (reading "corruptly" in 18 U.S.C. § 1512(b) to mean "motivated by an improper purpose"), *rev'd*, 544 U.S. 696.

Fifth Circuit's ruling, said the NACDL, "disregards the traditional role of lawyers, which includes a duty to protect their clients by deflecting potential government investigations."<sup>76</sup> Similarly, according to the amicus brief of the New York Council of Defense Lawyers (NYCDL), "an attorney may need to give her client advice that, if followed, would result in testimony, a document, or a record being withheld from an official proceeding or that would result in the testimony of a witness being influenced. That is an attorney's job."<sup>77</sup> Whether the U.S. Supreme Court would go quite so far is uncertain from its opinion in *Arthur Andersen*, wherein the only examples of legitimately impeding government investigations concern the assertion of privileges and the question-begging "compl[iance] with a *valid* document retention policy under *ordinary* circumstances."<sup>78</sup> But it seems clear at least from these briefs that litigators themselves go at least so far in daily practice.

The NACDL boasts 12,500 members.<sup>79</sup> The SEC has approximately 4000 full-time positions with 1000 full-time staff in its enforcement division.<sup>80</sup> In assessing the full social cost of enforcement, what could justify counting what 4000 government lawyers do to investigate, but not what 12,500 defense lawyers do to impede that investigation?<sup>81</sup>

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<sup>76</sup> NACDL Brief, *supra* note 74, at 2; *see also id.* at 1–2 ("When a lawyer represents a client in connection with a potential government investigation, one of the lawyer's goals may appropriately be to prevent the government from developing evidence against the client. Within the bounds of ethics and the law, that is what lawyers do."); *id.* at 8 ("[I]nvariably in the practice of law a zealous advocate will devise and execute legitimate strategies intended, at least in part, to deflect an investigation. In essence, that is a lawyer's job."). The NACDL was quite explicit regarding the activities of zealous advocates:

[T]he lower court's reading of the statute intrudes deeply into the day-to-day practice of law . . . .

. . . .  
 Lawyers review draft documents for their clients all the time. They routinely recommend revising or deleting inflammatory, pejorative, or potentially incriminating language, often, at least in part, to limit exposure in the event of a possible future government investigation.

*Id.* at 21–22.

<sup>77</sup> Brief of Amicus Curiae N.Y. Council of Def. Lawyers in Support of Petitioner at 6, *Arthur Andersen*, 544 U.S. 696 (No. 04-368), 2005 WL 435901, at \*6; *see also id.* at 2 ("Lawyers representing corporations or individuals often give advice or take action designed to protect their client yet impede the fact-finding ability of a government investigation.").

<sup>78</sup> *Arthur Andersen*, 544 U.S. at 704 (emphasis added).

<sup>79</sup> Nat'l Ass'n of Criminal Def. Lawyers, *Who We Are*, <http://www.nacdl.org/public.nsf/freeform/WhoWeAre?OpenDocument> (last visited May 21, 2006).

<sup>80</sup> 2003 SEC ANN. REP. 15, 142.

<sup>81</sup> The comparison is, of course, imprecise, yet telling.

### B. The Cost of “Retaining” Documents

One thing a lawyer might do to avoid detection is help clients destroy evidence of violations. Much of this activity is likely to be *sub rosa* and its full magnitude difficult to gauge. But some destructive activity is not sanctionable (or at least not clearly so), and its relative openness provides another opportunity to glimpse at least a portion of the costs of detection avoidance.

If a firm destroys documents with an eye toward impeding a particular government investigation, it exposes itself to prosecution for obstruction of justice, as well as a host of potential evidentiary and procedural sanctions.<sup>82</sup> If, however, a firm destroys documents with no particular investigation in its sights, that destruction will typically not trigger sanction, even if the destroyed documents turn out to be the missing link in a future enforcement action.<sup>83</sup>

Precisely how out of focus the future investigation must be in order to shield the firm from punishment is unsettled. It appears that one way to produce the requisite disconnectedness is to institute an ongoing program of document destruction, with the semblance of routine house cleaning, one whose detection avoidance goals are diluted by the correlated and not *entirely* implausible desire to manage the expense of document storage.<sup>84</sup>

Although systematic empirical evidence tends to be scarce and, where available, somewhat stale, such “document retention policies” appear to be prevalent.<sup>85</sup> Important for this Article’s analysis, these

<sup>82</sup> *Capellupo v. FMC Corp.*, 126 F.R.D. 545, 553 (D. Minn. 1989) (sanctioning document destruction by requiring payment of twice other side’s expenditures resulting therefrom); *Carlucci v. Piper Aircraft Corp.*, 102 F.R.D. 472, 489 (S.D. Fla. 1984) (sanctioning failure to produce documents by entering default against offending party), *aff’d*, 775 F.2d 1440, 1442 (11th Cir. 1985).

<sup>83</sup> *Arthur Andersen*, 544 U.S. at 704; *Lewy v. Remington Arms Co.*, 836 F.2d 1104, 1112 (8th Cir. 1988) (suggesting that reasonable good-faith document retention policy would render spoliation instruction inappropriate).

<sup>84</sup> See *Lewy*, 836 F.2d at 1112 (noting factors that might render retention policy reasonable).

<sup>85</sup> GORELICK ET AL., *supra* note 28, § 8.2, at 276 (“The vast majority of large business enterprises now has some formal document-management program.” (citing John M. Fedders & Lauryn H. Guttenplan, *Document Retention and Destruction: Practical, Legal and Ethical Considerations*, 56 NOTRE DAME LAW. 5, 12 (1980))); Oesterle, *supra* note 28, at 1185–86 (“[M]any corporations purposefully operate programs to destroy evidence . . . primarily to reduce litigation ‘exposure.’”); Lawrence Solum & Stephen Marzen, *Truth and Uncertainty: Legal Control of the Destruction of Evidence*, 36 EMORY L.J. 1085, 1183 (1987) (“The routine destruction of documents, often accomplished through formal ‘document management’ programs, has become commonplace.” (citing AM. SOC’Y OF CORPORATE SEC’YS, INC., SURVEY OF RECORDS RETENTION PRACTICES 2 (1971))). Document retention programs are often the subject of articles in practice literature. See generally GORELICK ET AL., *supra* note 28, app. A (providing sample policies); *id.* app. B (same); KOESEL ET AL., *supra* note 59, at 16–26 (discussing importance of documentation retention

policies also appear to be expensive. Ironically, given the state of the literature on public enforcement, the chief expense is not in drafting the policy, but in enforcing it.

Presumably, few firms promote on the basis of how well an employee complies with its document policy; few bonuses reflect a job well done in this regard. More likely, routine instructions to comply with the firm's document retention policy sit long untended on employees' lists of low-priority things to do. Had it been otherwise at Credit Suisse First Boston, after all, Frank Quattrone would have had no need to forward the e-mail ("Time to clean up those files") that led to his conviction for obstruction.<sup>86</sup>

Indeed, to the extent that employees would, without prodding, give document retention policies a first thought, this is likely to be immediately accompanied by second thoughts. Neglecting document cleanup might not seem like such a bad idea, given a modicum of foresight about the fact that, in future states of the world where such documents become important, the employee's interests may not always line up with those of the firm. Thus, while a midlevel manager may urge her subordinates to shred documents, she may decide to keep a choice collection in her own personal files, anticipating the possibility of later trading these for leniency with prosecutors and regulators.

How do firms manage this costly *private* enforcement problem? Some firms employ individuals specifically to enforce their retention policies. Salary payments then flow to an employee who is not engaged in the underlying productive activity of the firm. Should cost-cutting become imperative, such employees are more likely to be let go or reassigned. Thus, "early [in 2000], to cut costs, Andersen dismissed some employees who handled . . . shredding, and paper began stacking up. By June [2001], accountants handling Enron in Houston were virtually buried in documents that, under [Andersen's document retention] policy, should have been shredded long before."<sup>87</sup> Other firms make document destruction a periodic event, like the company picnic. Rambus Inc., a chip manufacturer, allegedly held an annual "shred day," whereon employees were provided with burlap sacks and, on at least one occasion, pizza, beer, and cham-

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policies and providing advice on how to implement them); Fedders & Guttenplan, *supra* (providing general advice on document retention policies); Donald S. Skupsky, *Discovery and Destruction of E-Mail*, in *THE INTERNET AND BUSINESS: A LAWYER'S GUIDE TO THE EMERGING LEGAL ISSUES* 47 (Joseph F. Ruh, Jr. ed., 1996) (discussing how e-mail messages are stored and can be used against author, making recommendations about how to handle e-mail).

<sup>86</sup> United States v. Quattrone, 441 F.3d 153, 165 (2d Cir. 2006).

<sup>87</sup> Kurt Eichenwald, *Andersen Misread Depths of the Government's Anger*, N.Y. TIMES, Mar. 18, 2002, at A1.

pagne.<sup>88</sup> The question arises, what weren't employees doing while they were busy shredding, chewing, and sipping?

Still other firms hire third-party auditors. A thriving business has grown up around the problem of enforcing document retention policies. The advertising tag: "It's one thing to have a policy; it's another to implement and audit it."<sup>89</sup>

Thus, effective document destruction costs quite a bit more than the electricity used to power the shredder, its chief costs inuring to enforcement. How odd then that while the conventional enforcement paradigm carefully counts the costs of having the SEC acquire and sift through a firm's documents in its attempt to detect violations, it does not count the firm's cost of sifting through and destroying documents in its attempt to avoid detection.

### C. *Correction Versus Cover-up at the Eleventh Hour*

Sometimes document retention policies are insufficiently comprehensive, or are allowed to lapse, in which case some last-minute evidence destruction may be attempted. Such last-minute destruction also entails social costs, though of a different kind from the cost of "retention" policies.

Emergency destruction comes at a time of crisis. Instead of trying to prevent a bad outcome, the individual diverts attention to avoiding

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<sup>88</sup> *Lawyer: Rambus Shredded Evidence*, L.A. TIMES, Feb. 7, 2005, at C2 (describing allegations of lawyer for Rambus's litigation opponent).

<sup>89</sup> Forensicon, Document Retention Policy: Lesson from Anderson [sic]: E-Mail Reveals!, <http://www.forensicon.com/articles/document-retention-policies.asp> (last visited July 8, 2006). One portion of Forensicon's advertisement is particularly enlightening:

Preventive maintenance, including the education and training of employees on the policy, is essential to ensure the policy is enforced. "We work with management and counsel to test the effectiveness of the policy by conducting periodic searches of the data environment to see whether or not anything of interest turns up. If something is found, counsel and the client discuss the ramifications and develop a strategy for dealing with that data or problematic behavior before anything gets to the point of litigation, so that the firm is protected and doesn't incriminate itself by keeping needlessly files that it has a right to dispose of."

....  
 "If you have a policy, you need to audit it." Neubecker [Forensicon's President] explains. "If you say these are things you do and don't do in email, how do you know employees are following the policy? . . . You need to periodically pull in a third party firm to audit your adherence to your communications policies. Recent events and trends suggest that as firms get slapped with lawsuits, business leaders will appreciate the value of managing this risk. Insurance rates are going to go up, and eventually companies will be required to enforce and audit their document retention policies with third party risk management firms in conjunction with attorneys."

*Id.*

blame. When her ability to prevent a crisis is possible but uncertain, the individual has a difficult choice to make: Buckle down, or cover up.

Arthur Andersen chose to cover up. According to the government's Supreme Court brief opposing the partnership's petition for a writ of certiorari:

[Andersen's] Enron auditors were instructed to make compliance with the document policy a priority *despite the mounting time pressure they faced in dealing with Enron's accounting problems*. As a result, the Enron engagement team made an unprecedented effort to destroy non-workpaper documents. Documents were shredded on-site and also were shipped to [Andersen]'s main office for bulk shredding. A chart showing the quantity of materials shipped for shredding during 2001 reveals the extraordinary spike in physical document destruction that coincided with [Andersen]'s discovery of the SEC inquiry. In addition to the destruction of hard copies of documents, tens of thousands of e-mails and other electronic documents were deleted, representing at least a three-fold increase over usual activity.<sup>90</sup>

#### D. Evidence Non-Creation

Another way to avoid detection is to avoid creating the evidence in the first place. “‘Don’t put it in writing’ is advice lawyers give every day—to protect clients from creating documents that may be used, or often misused, to their detriment.”<sup>91</sup> Lawyers reportedly encourage clients to follow the “*New York Times* rule”: “When writing any document, ask ‘How would I feel if I saw this on the front page of the *New York Times*?’”<sup>92</sup> Union Pacific, facing litigation arising from accidents at train crossings, instructs its claims investigators that “no useful purpose is served by extensively documenting evidence.”<sup>93</sup> The litigation consulting firm LitigationProofing LLC lists among the

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<sup>90</sup> Brief for the United States in Opposition at 7, *Arthur Andersen LLP v. United States*, 544 U.S. 696 (2005) (No. 04-368), 2004 WL 2825876, at \*7 (citation omitted) (emphasis added).

<sup>91</sup> Stephen Gillers, Op-Ed, *The Flaw in the Andersen Verdict*, N.Y. TIMES, June 18, 2002, at A23.

<sup>92</sup> Jack V. Auspitz & Susan E. Quinn, *Litigators' View of Due Diligence*, in CONDUCTING DUE DILIGENCE 2003, at 107, 173 (PLI Corp. Law & Practice, Course Handbook Series No. B-1368, 2003), cited in NACDL Brief, *supra* note 74, at 22; accord Ellis R. Mirsky, *Managing the Litigation Process*, in LITIGATION MANAGEMENT SUPERCOURSE 1991: TECHNIQUES FOR IN-HOUSE AND OUTSIDE COUNSEL, at 9, 30 (PLI Litig. & Admin. Practice, Course Handbook Series No. 407, 1991), cited in NACDL Brief, *supra* note 74, at 22.

<sup>93</sup> Walt Bogdanich, *In Deaths at Rail Crossings, Missing Evidence and Silence*, N.Y. TIMES, July 11, 2004, § 1, at 1 (quoting Union Pacific manual on accident investigation guidelines).

“seven deadly sins of business email” such transgressions as “[n]ot considering how it would look in the newspaper,” “leaking sensitive information,” and “carrying on a debate.”<sup>94</sup>

Evidence non-creation is also costly. People create records for a reason. The unaided human mind is in many respects not particularly impressive, and usually not up to the complex task of running an enterprise (legitimate or otherwise) in the modern world. Fortunately, after several centuries of failure and reflection, the mind has been at least impressive enough to develop clever methods of compensating for its shortcomings. These methods often involve keeping records to aid the working- and long-term memory.<sup>95</sup>

Furthermore, records are also often the by-product of devices that facilitate communication. E-mail and paper correspondence, for example, remove the necessity of physical proximity from the act of communicating. And finally, having a record of what was said facilitates coordination by preventing misunderstandings (either actual or the ex post pretense thereof).

Such records, however, are the stuff of evidence. The proverbial “paper trail” is often a trail of mental crutches.<sup>96</sup> Martha Stewart and her broker, for instance, were convicted largely on the basis of phone logs and worksheets.<sup>97</sup>

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<sup>94</sup> Porus P. Cooper, *E-Mail Trail Can Cause Defendants Trouble@Work*, PHILA. INQUIRER, May 27, 2005, at C1.

<sup>95</sup> See generally Sanchirico, *Upside of Cognitive Error*, *supra* note 45, at 355–62 (describing use of cognitive artifacts).

<sup>96</sup> See *id.* (describing examples in which memory aids were used as evidence).

<sup>97</sup> Superseding Indictment at 7, *United States v. Stewart*, 323 F. Supp. 2d 606 (S.D.N.Y. 2004) (No. S1 03 Cr. 717 (MGC)), available at <http://news.findlaw.com/hdocs/docs/mstewart/usmspb10504sind.pdf> [hereinafter *Stewart Indictment*] (“[W]ithin minutes after being informed of the sale and attempted sale of the Waksal Shares, PETER BACANOVIC called MARTHA STEWART. After being told that STEWART was in transit and unavailable, BACANOVIC left a message, memorialized by STEWART’s assistant, that ‘Peter Bacanovic thinks ImClone is going to start trading downward.’”). In addition, the ImClone CEO’s phone log for later that same day read, “Martha Stewart something is going on with ImClone and she wants to know what . . . .” Samuel Waksal’s December 27, 2001 Message Log, <http://news.findlaw.com/hdocs/docs/mstewart/swms122701msglog.html> (last visited July 8, 2006). The indictment also alleges:

[One week before the phone message, Bacanovic] printed a “worksheet” that listed each of the stocks held by MARTHA STEWART at Merrill Lynch, including ImClone . . . . BACANOVIC made handwritten notes in blue ballpoint ink on the Worksheet concerning transactions and planned transactions in STEWART’s account. . . . BACANOVIC made no notes on the Worksheet regarding any purported decision to sell STEWART’s ImClone shares at \$60 per share.

*Stewart Indictment*, *supra*, at 16; see also *id.* at 17 (discussing allegation that Bacanovic later penned in “@60”).

As a result, individuals face a dilemma, one that affects even legitimate activities. Not knowing or caring to focus constant attention on whether any given set of notes will end up as, or lead to, damaging evidence, the individual too broadly refrains from recordation. Consequently, she and her team function at a lower level than they otherwise would. She cannot remember the details of the meeting. And even if she or someone else eventually remembers, documents prepared in error must be revised; actions taken in error must be undone. Similarly, having cautiously declined to record her promise to perform a task, she sincerely forgets to complete a part of the task that would have been relatively inexpensive to complete when her equipment was onsite.

### E. Lying

Records—in their systematic ongoing destruction, their destruction in crisis mode at the eleventh hour, or their non-creation in the first place—may well be the source of significant detection avoidance costs. But what about lying? Perhaps good old-fashioned deception is an example of an act of detection avoidance that is much less costly to perpetrate than to penetrate. After all, lying is easy. First you fill your lungs. Then you say something false. In contrast, to detect that someone else is lying requires extensive research and intensive preparation.

But this contrast is misleading. The act with which to compare lie detection is not lying *per se*; it is lying undetected. And lying undetected may well require as much effort as successfully detecting a lie. All the loose ends that the lie detector might pull to unravel the lie must be anticipated and sewn up ahead of time by the liar. If the lie detector will ferret out witnesses with contradictory accounts, the liar must visit them first. If the lie detector will comb the liar's account for internal inconsistencies, the liar must do the same with her anticipated account. If the lie detector will investigate whether the liar's account is consistent with the state of the world at the time of purported events—with train schedules, sight lines, distances—then the liar must pre-investigate the same in crafting her lie.<sup>98</sup> It is likely, therefore, that for every hour of effort logged by the lie detector, at least one hour is logged by the successful liar.

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<sup>98</sup> See Sanchirico, *Upside of Cognitive Error*, *supra* note 45, at 317–44 (describing cognitive difficulty of successfully fabricating witness testimony).

### III A BROADER THEORETICAL FRAMEWORK

Recognizing that enforcement is a two-sided affair has a profound impact on both of the core components of the neoclassical approach to public enforcement, as described in Part I.<sup>99</sup> And it is helpful to lay these effects out systematically before proceeding to a more specific comparison of policy alternatives. This Part first describes the effect on deterrence mechanics and then the effect on social cost accounting. It concludes with a discussion of how enforcement policies ought to be compared within the broader framework thus constructed.

#### A. *The Effect of Detection Avoidance on Deterrence Mechanics*

Under the conventional neoclassical approach, the degree to which underlying violations are deterred depends on the sanction and the detection probability. Detection avoidance complicates this simple mechanic in several ways.

First, and most obviously, detection avoidance activities reduce the probability that underlying violations will be detected. To this extent, such activities reduce the law's deterrent force.

Second, and counter to the first effect, detection avoidance activities are costly for those who engage in them, and such costs must be counted as part of the effective sanction for the underlying violation. Time and effort spent covering up improper corporate self-dealing, for example, is time and effort not spent entering new markets or developing new products—or playing golf for that matter. From the self-dealer's perspective there is little difference between a dollar of sanction for self-dealing<sup>100</sup> and a dollar spent avoiding that sanction. Both are costs of self-dealing. Thus, although detection avoidance activities reduce the probability that self-dealing will be detected, the resulting reduction in deterrence is mitigated by the self-dealer's additional detection avoidance costs.<sup>101</sup>

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<sup>99</sup> See *supra* Part I.A.

<sup>100</sup> This "dollar" may reflect the monetized value of nonmonetary costs.

<sup>101</sup> Given that these first two effects are countervailing, how do they compare in magnitude? It is easiest to analyze the case in which the violator is perfectly rational, from which some conclusions may perhaps be extrapolated.

The total net effect of the rational violator's detection avoidance must be to lower her effective sanction. The dollar value of the reduction in the probability of detection (the first effect described in the text) must exceed what she is spending on that reduction (the second effect). Otherwise, she could do better by doing nothing to avoid detection.

Marginal changes from her chosen amount of detection avoidance expenditure, however, will have no impact on the effective sanction. The two effects described in the text will precisely balance. A violator who minimizes the effective sanction will choose her

Third, adding detection avoidance to the story raises the possibility that it itself can be sanctioned. Later parts of the Article cast doubt on the wisdom of sanctioning detection avoidance in an effort to deter detection avoidance itself. The question here is whether it helps to deter the *underlying violation*, and the answer is yes. Penalizing obstruction, for example, imposes upon the corporate self-dealer another cost—a legally constructed, probabilistic cost—of avoiding detection. As with the *direct* costs of detection avoidance activities, discussed above, this legally constructed cost counteracts the fact that detection avoidance reduces the detection probability for the underlying self-dealing. Again, the self-dealer is being forced to pay for activities that reduce the probability that the underlying violation will be detected. Here the payment is in terms of the risk of obstruction penalties, rather than the direct costs of these activities.<sup>102</sup>

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level of detection avoidance at a point where the marginal cost of detection avoidance equals its marginal benefit—where each additional dollar of detection avoidance buys a dollar's worth of reduction in the probability of detection. Were this not so, the violator could marginally adjust her detection avoidance expenditure (up or down) and lower the effective sanction, contradicting the premise that she has already minimized that quantity.

The fact that detection avoidance has no marginal impact on the effective sanction has implications for evaluating the deterrence effects of marginal policy changes. One might imagine that such changes have two effects on deterrence, a direct effect that is measured holding detection avoidance activities constant and an indirect effect that operates via inspired changes in detection avoidance. In fact, such marginal policy changes have only a direct effect.

Consider, for example, increasing the legal sanction on the underlying activity. The direct effect on deterrence is the expected increase in deterrence holding detection avoidance activities constant. The indirect effect on deterrence is the effect on deterrence of the additional detection avoidance that increasing the sanction inspires. One might imagine that this indirect effect dampens (or enhances) the direct effect of increasing the sanction. But, as noted above, this indirect effect is canceled out by the detection avoider's balancing of margins in her prior optimization. If marginal adjustments in detection avoidance activity had any effect on the avoider's payoffs (i.e., on deterrence) she would have already made these adjustments. This leaves only the direct effect.

The foregoing is an informal statement of the so-called "envelope theorem." For more on the envelope theorem see the discussion in Sanchirico, *Evidence Tampering*, *supra* note 28, at 1059 n.139 and Ian Ayres, *Pushing the Envelope: Antitrust Implications of the Envelope Theorem*, 17 *MISS. C. L. REV.* 21 (1996).

<sup>102</sup> Two notes are in order here. First, one sometimes hears that perjury and obstruction are important prosecutorial tools because there are many occasions where prosecutors cannot secure a conviction on the underlying violation but can secure a conviction on the process crime. To the extent that this argument goes to primary activity deterrence, it is just another way of saying that sanctions on detection avoidance shore up deterrence of underlying violations, as just noted. The fact that there will be occasions where only the detection avoidance and not the underlying violation is detectable is irrelevant to the point that the sanction on detection avoidance increases the *ex ante* cost of the underlying violation.

Second, the deterrent effect on the underlying activity from sanctioning detection avoidance is naturally bounded. In particular, the effective sanction for the underlying violation cannot exceed the legal sanction for the underlying activity, no matter how great

Finally, accounting for detection avoidance turns detection itself into a more complex policy variable. Accordingly, the range of alternative detection policies expands. Informed by neoclassical enforcement theory, we are accustomed to thinking of detection as a single probability. The state presents this probability to the violator who then acts in accord with her interests. But with detection avoidance in the picture, violators themselves can affect the probability of detection, at cost. And thus the state effectively presents to the violator not a single probability of detection, but a “menu” of detection probabilities, one for each of her possible choices of detection avoidance intensity. By adjusting this menu, the state can affect both the detection avoidance choices of violators and the decision to violate the law in the first place—just as a restaurant, in adjusting its menu, can affect both what its patrons order as well as how many patrons it attracts. Adjusting this menu is the basic mechanism of the technological approach, which we explore in detail in Part VI.<sup>103</sup>

### *B. The Effect of Detection Avoidance on Social Cost Accounting*

The neoclassical approach focuses on the publicly incurred cost of “detecting” underlying violations as well as the direct social cost of sanctions like imprisonment. To these two costs, three new costs must be added.

The first necessary addition is the private cost of detection avoidance: expenses incurred by private parties in hampering investigation and fighting prosecution.<sup>104</sup> The state’s detection activities are costly because they divert labor and capital from other productive activities.

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the sanction on detection avoidance. The violator’s effective sanction is the minimized sum of the expected underlying sanction plus the cost of avoidance, where the minimization is performed by choice of avoidance effort. This minimal sum can be no greater than the underlying sanction because the violator always has the option of exerting no avoidance effort and incurring the underlying sanction (or, in fact, less than this if the zero-avoidance probability of detection is less than one). The possibility that detection avoidance sanctions will be wrongfully imposed on the violator complicates the analysis. But the conclusions remain qualitatively similar.

<sup>103</sup> As under the conventional approach to enforcement, the foregoing discussion generally abstracts from the possibility that liability may be wrongfully imposed. But the effects identified in this Article can be regarded as the net effect on the expected sanction given commission of the violation and the expected sanction given restraint. Consider, for example, the first effect discussed. Detection avoidance lowers the probability of detection for *both* the guilty and the innocent. But, arguably, it lowers the probability more for the guilty who have more to cover up. On net, therefore, detection avoidance detracts from deterrence.

<sup>104</sup> Some activities, like harming or bribing witnesses, do double duty as detection avoidance relative to other violations and as violations in and of themselves. The analysis applies to these activities as well, with the added feature that some of the direct costs of detection avoidance are externalities relative to the avoider’s detection avoidance decision.

Detection avoidance is costly for precisely the same reason.<sup>105</sup> The fact that detection avoidance expenses are privately rather than publicly financed makes them no less of a social cost. The social cost of violations and imprisonment—two costs most definitely counted in the neoclassical approach—are also largely privately incurred.

The other two costs that must be added to the analysis arise to the extent that detection avoidance is itself subject to sanction. They are counterparts to the two costs—of detection and of sanctioning—that are emphasized in the neoclassical paradigm. First, there is the public cost of detecting detection avoidance. Perjury, for example, must also be investigated and prosecuted.<sup>106</sup> Second, there is the direct cost of sanctioning detection avoidance. When, for example, Martha Stewart spent five months in prison for obstructing justice and lying to investigators, the costs to society included, inter alia, the apportioned cost of operating the prison and the opportunity cost of reducing (however slightly) Stewart's productivity.<sup>107</sup>

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<sup>105</sup> One might claim that the social cost of detection avoidance is a substantial problem only to the extent that underlying violations are not completely deterred across the full population. But note that this does not distinguish detection avoidance costs from the bulk of enforcement costs, including, e.g., the direct cost of imposing sanctions. Moreover, this conditional negligibility does not render detection avoidance costs any less of a practical problem, given the condition's practical failure.

<sup>106</sup> This cost is discussed in more detail in Part VII.C.

<sup>107</sup> Two proposals for curbing detection avoidance costs are worth considering.

First, Malik considers the possibility that offenders' private benefits from underlying law violations might be wholly or partially observable by the court, explaining that this would enable the state to reduce detection avoidance costs without sacrificing efficient deterrence. Malik, *supra* note 24, at 348–51. To see this, consider the limiting case in which the state can perfectly and costlessly observe the violator's private benefits from the violation. Fix the level of detection. Given the information at its disposal, the state can institute the following sanctioning rule: If the actor's private gains from the violation are less than the social cost of the violation, impose the largest possible sanction given wealth constraints; if the actor's gains exceed the social cost of the violation, impose no sanction. Assuming that the largest possible sanction is enough to deter any actor given the current level of detection, the only individuals who would commit the offense would be those whose private gains from the violation *exceeded* the social cost of the violation. These individuals would not be subject to punishment and, therefore, would have no need for detection avoidance. Nor would their counterparts, who are deterred from committing the violation. Thus, there would be no detection avoidance. Further, deterrence would be efficient (given the level of detection) because only those whose private benefits exceed the associated social costs would commit the violation. Professor Shavell makes a similar point with regard to other sanctioning costs in Steven Shavell, *Criminal Law and the Optimal Use of Nonmonetary Sanctions as a Deterrent*, 85 COLUM. L. REV. 1232, 1242 (1985). One problem with this story is that it neglects the state's difficulty in detecting—and the violator's incentive to avoid detection of—the fact that the social costs from a violation exceed the violator's private benefits.

Second, Professor Innes proposes that detection avoidance costs can be reduced by offering violators who report their own violations a discounted sanction equal to slightly less than the expected effective sanction they would face for unreported violations, where

### C. Comparing Policy Instruments

In the context of this expanded framework we ask again the question posed by the neoclassical approach: What is the most cost-effective means of deterring law violations? Answering this question requires evaluating the cost-effectiveness of each of the several policy instruments at our disposal, including sanctions on underlying violations, sanctions on detection avoidance, and detection policies like the technological approach. There are two attributes to consider in evaluating each instrument. First, how much does the instrument contribute to deterrence? That is, how much does it raise the effective private cost to the potential offender of the underlying violation? Second, how much does it contribute to social costs, whether directly or through the behavior it induces? A cost-effective instrument incurs low social costs per “unit” of generated deterrence. Or expressing the same point in reciprocal terms, such an instrument has a large deterrence “bang” for its social cost “buck.”<sup>108</sup>

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the expected effective sanction is calculated taking into account the cost and detection-probability-reducing effect of violators’ anticipated detection avoidance. Violators would take this offer and thus have no need to avoid detection. At the same time deterrence would be essentially maintained because the discounted sanction would roughly equal the effective sanction for unreported violations. Innes, *supra* note 24, at 241, 246.

Yet Innes’s solution is only partial under the realistic assumption that the cost-effectiveness of detection avoidance activities is heterogeneous across violators and not directly observable by the regulator. *See id.* at 247 (assuming government knows how violator’s risk of being sanctioned depends on her avoidance effort and noting this assumption’s unrealistic nature). In this case it is not possible to offer simultaneously to all violators a discounted sanction for disclosure equal to slightly less than the expected effective sanction they would face for unreported violations. A discount tailored to a relatively effective detection avoider would be excessive for a relatively ineffective detection avoider. The regulator thus faces a tradeoff in setting the discounted sanction between, on the one hand, inducing the marginal detection avoider to report her violation rather than spend on avoidance and, on the other hand, lowering the level of deterrence for inframarginal detection avoiders who have already been convinced to report. The optimal discounted sanction allowing for heterogeneity is thus consistent with extensive detection avoidance. *See id.* at 248 (noting that optimal self-reporting sanction under highly heterogeneous conditions would be high enough to induce some violators not to self-report).

Furthermore, Innes assumes that disclosure itself is immune from manipulation. *See id.* at 244 (implying appropriate sanction for self-reported violations makes self-disclosure incompatible with detection avoidance). Yet if disclosure of *some* violation halts or slows investigation, violators might use disclosure of small violations to cover large, in which case disclosure itself would be a mode of detection avoidance. This is one explanation for why disclosed violations under EPA’s self-reporting program have been disproportionately minor. Alexander Pfaff & Chris William Sanchirico, *Big Field, Small Potatoes: An Empirical Assessment of EPA’s Self-Audit Policy*, 23 J. POL’Y ANALYSIS & MGMT. 415, 426 (2004).

<sup>108</sup> An instrument’s efficiency in generating deterrence will generally vary with the extent to which it and other instruments are employed. In particular, like factors of production an instrument may become less productive the more it is employed. Accordingly, the socially optimal enforcement regime may involve a mixture of instruments. Roughly

We have already discussed in Part I the cost-effectiveness of the policy instrument of sanctioning the primary activity violation. In particular, we have noted an important new consideration that arises from recognizing the existence of detection avoidance, namely the detection avoidance principle.<sup>109</sup> What remains is to evaluate the cost-effectiveness of the other policy instruments identified above, namely sanctions *on detection avoidance* and the expanded range of detection policies. The next two Parts explore the cost-effectiveness of sanctioning detection avoidance. Part VI turns to detection policies that attack the technology of avoidance.

#### IV

#### THE RECURSIVITY OF DETECTION AVOIDANCE

At first blush, sanctioning detection avoidance seems like a promising policy option. There will, of course, be the cost of investigating and prosecuting yet another species of violation. But perhaps such additional public detection costs will pay for themselves in reduced private detection avoidance. And, to boot, sanctioning detection avoidance will increase deterrence of the underlying violation by raising the effective cost of perpetrating such violations. Perhaps, then, sanctioning detection avoidance kills two birds with one stone by deterring both the underlying wrong and the detection avoidance activity.

An implicit assumption underlying this optimistic suggestion is that detection avoidance is subject to the same detect-and-sanction mechanic as any other activity—that sanctioning detection avoidance discourages detection avoidance just as sanctioning robbery discourages robbery. Such is the implicit assumption of the few commentators who consider the effects of sanctioning perjury and obstruction.<sup>110</sup> And to read as written the statutes governing such process crimes, it also appears to be the implicit assumption underlying the law. Perjury and obstruction of justice are crimes, just as robbery is a crime.<sup>111</sup> Uncharged obstructive behavior in the investigation or prosecution of

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speaking, however, instruments that tend to be more efficient across a broad range of employment levels will be more intensely employed at the optimum. Furthermore, the efficiency of each instrument in the neighborhood of current levels of employment (which may not be optimal) is relevant for determining how best to increase deterrence from its current level, should that be desired. It is also relevant to determining whether and how, in producing the current level of deterrence, resources could be conserved by substituting one instrument for another.

<sup>109</sup> For a formal statement of the detection avoidance principle, see Part IV.A *infra*.

<sup>110</sup> See *supra* note 28.

<sup>111</sup> See, e.g., 18 U.S.C. §§ 1001, 1503, 1505, 1512, 1519, 1520, 1621, 1623 (2000 & Supp. III 2005).

another crime is grounds for sentencing enhancement.<sup>112</sup> And various forms of evidentiary foul play—short of perjury or obstruction, but long of zealous advocacy—are subject to procedural sanction, either by explicit procedural rule<sup>113</sup> or by courts' exercise of their "inherent power" to govern process.<sup>114</sup>

But detection avoidance is not, in fact, like robbery. It is a species of violation with special properties, a social problem to which the usual detect-and-sanction mechanic does not apply. Cleave another violation with a sanction and you discourage it. Cleave detection avoidance, and like the hydra, it grows another head.

### A. *The Infinite Regress of Detection Avoidance*

The hip-hop artist Lil' Kim was recently convicted of lying to the grand jury investigating her associates' involvement in a shooting outside the studios of radio station Hot 97. At her perjury trial she lied to the trial jury about having lied to the grand jury.<sup>115</sup>

The investment bank Morgan Stanley was recently sued for aiding and abetting fraud in connection with the demise of the Sunbeam Corporation.<sup>116</sup> Ordered to produce relevant e-mail correspondence,<sup>117</sup> it stonewalled.<sup>118</sup> Ordered to produce documents relevant to the accusation that it was stonewalling, it stonewalled.<sup>119</sup>

This is what people do.<sup>120</sup> They do not simply lie. They lie about lying. And if you accuse them of that, they lie about lying about lying.

<sup>112</sup> See, e.g., U.S. SENTENCING GUIDELINES MANUAL § 3C1.1 (2005) (providing two-level enhancement for related obstructive conduct).

<sup>113</sup> See, e.g., FED. R. CIV. P. 11, 26(g), 37 (providing sanctions for misrepresentation to court or noncompliance with discovery orders).

<sup>114</sup> See, e.g., *Lewy v. Remington Arms Co.*, 836 F.2d 1104, 1112 (8th Cir. 1988) (upholding trial court's power to issue spoliation jury instruction for destruction under document retention policy); *Capellupo v. FMC Corp.*, 126 F.R.D. 545, 553–54 (D. Minn. 1989) (imposing monetary sanction for document destruction); *Carlucci v. Piper Aircraft Corp.*, 102 F.R.D. 472, 489 (S.D. Fla. 1984) (sanctioning failure to produce documents by entering default against offending party), *aff'd*, 775 F.2d 1440, 1442 (11th Cir. 1985).

<sup>115</sup> Julia Preston, *Admitting to Lies About Shooting, Lil' Kim Gets One Year in Prison*, N.Y. TIMES, July 7, 2005, at B1.

<sup>116</sup> *Coleman (Parent) Holdings, Inc. v. Morgan Stanley & Co.*, No. CA 03-5045 AI, 2005 WL 674885 (Fla. Cir. Ct. Mar. 23, 2005).

<sup>117</sup> *Id.* at \*1 (describing "Agreed Order").

<sup>118</sup> *Id.* at \*5 & n.11.

<sup>119</sup> *Id.* at \*7 ("MS & Co. improperly failed to produce 125 documents required to be produced by the Court's February 3, 2005, Order Specially Setting Hearing which required limited discovery be made in connection with the February 14, 2005, hearing on the Adverse Inference Motion.").

<sup>120</sup> See also *United States v. Roche*, 321 F.3d 607, 608–09 (6th Cir. 2003) (describing how defendant in attempting to lighten his sentence fabricated letter from mother of his children stating that he consistently made child support payments; indicted for obstructive forgery, he attempted to convince mother to falsely testify she consented to letter; and

They do not simply destroy evidence. They also destroy evidence of evidence destruction. And if you ask them about either destruction, they lie. They do not merely intimidate witnesses. They lie about the intimidation, then destroy evidence of the lying, and then intimidate witnesses to the destruction. Cover-up is covered up in a chain of effectively infinite length: a chain, that is, always one link longer than the pursuer is willing to follow it.

This potentially infinite regress wrecks havoc on the conventional detection-and-sanction machinery of neoclassical enforcement theory. We have already noted Malik's insight that imposing a fine on primary violations like robbery encourages those who still commit the violations to expend effort avoiding detection of primary violations. We can generalize this to the "detection avoidance principle": Sanctioning activity  $X$  encourages another activity  $X+I$  in the form of effort exerted to avoid detection of  $X$  by those who still choose to engage in  $X$ .

Stating the principle in these general terms makes clear that it is recursive. Because the formula applies to *any* activity  $X$ , we are free to substitute "detection avoidance" itself for  $X$ , whereby it begets an  $X+I$  equal to effort exerted to avoid detection of *detection avoidance*. Indeed, nothing stops us from returning to the formula with "detection avoidance of detection avoidance," substituting this for  $X$ , and generating, as  $X+I$ , effort exerted to avoid detection of *detection avoidance of detection avoidance*. And we may continue like this *ad infinitum*, repeatedly inputting the last application's output.

Thus, when we punish people more for underlying offenses, we encourage offenders to lie. If we try to solve this problem by punishing more for lying, we encourage liars to expend more effort covering up their lies. If we try to solve *this* problem by increasing the punishment for covering up lies, we encourage the cover-up of the cover-up of lying. Similarly, raising the punishment for the underlying offense encourages offenders to destroy damaging evidence. If we attack this social waste by punishing the destruction of evidence, we encourage people who still destroy evidence to, *inter alia*, destroy evidence of their destruction. If we then take aim at destruction of evi-

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accused of attempting to suborn perjury, he lied about incident); *United States v. Agoro*, 996 F.2d 1288, 1290 (1st Cir. 1993) (describing how defendant fled jurisdiction following his conviction for credit card fraud; charged with failing to appear, he fabricated excuse involving his wife's emergency return to Nigeria on developing "paralyzing disease of unknown origin"); *United States v. Lueddeke*, 908 F.2d 230, 232 (7th Cir. 1990) (describing how defendant lied to grand jury about making illegal payments to college football players to induce them to sign representation agreements; informed that he was being investigated for perjury, he forged documents to cover up lie).

dence of evidence destruction, we encourage people to destroy evidence of their destruction of evidence of evidence destruction. In more general terms, sanctioning the underlying offense encourages “first-order” detection avoidance. Sanctioning first-order detection avoidance encourages “second-order” detection avoidance. Sanctioning second-order encourages third. Sanctioning third encourages fourth. And so on.

Is it really plausible that violators engage in higher orders of cover-up? What *is* cover-up of cover-up of cover-up of cover-up? The assertion here is not that cover-up four times (or  $n$  times) removed is plausible in all circumstances. The assertion is that it becomes plausible in the only circumstance in which its plausibility matters. This is where it is assumed that the government can identify, sanction, and thereby discourage cover-up *three* times removed. The effectiveness of that sanction presupposes that cover-up three times removed is a discernible activity in the minds of violators. And at that point, its pedigree is irrelevant: It is just an activity and it will be covered up like any other that is also subject to sanction.

The point, therefore, is not that the detection avoidance principle unfolds in infinite regress all by itself. The point is that it *will* unfold if prodded—that it always remains one order ahead of the last effective sanction.

### B. Clarifying Remarks

The existence of this additional unanticipated difficulty is not by itself reason to give up on the enterprise of sanctioning detection avoidance. The next Part explores what might be done to surmount this newfound complication. But first a few clarifying remarks are in order regarding the nature of the problem.

The claim here is not that sanctioning lower-order detection avoidance necessarily produces higher-order detection avoidance where there was none before. The offender’s ability to avoid detection of her detection avoidance determines in part her success in avoiding detection. Success in avoiding detection by destroying documents, for example, is fostered by destroying documentary evidence of the destruction. The claim, rather, is that sanctioning detection avoidance creates an additional incentive to engage in higher-order detection avoidance.<sup>121</sup>

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<sup>121</sup> This remark implies a more complex and complete version of the detection avoidance principle. Sanctioning detection avoidance of order  $X$  encourages *all* orders of detection avoidance greater than  $X$ , since all higher orders facilitate avoiding detection of  $X$ .

Second, despite first appearances, the recursivity of detection avoidance is not another example of the age-old policy pitfall of ignoring substitution effects. The policy “hall of shame” is full of such instances: As when trying to reduce the fishing harvest by limiting boat size, we just induce fishermen to use better equipment with little effect on harvest;<sup>122</sup> or trying to enhance teacher performance by rewarding for high student test scores, we quash the teaching of unobservable attributes like creativity;<sup>123</sup> or trying to prevent car theft by equipping some cars with visible steering locks, we just induce thieves to rob the cars without such locks;<sup>124</sup> or trying to reduce cocaine use by increasing the penalty connected to that drug, we end up encouraging the use of heroin.<sup>125</sup> In all these cases, one activity is effectively taxed or subsidized, and the corresponding reduction or increase in that activity makes an alternative activity more or less productive. This seesaw relationship between one activity’s level and the other’s productivity is the essence of the substitution effect.

If anything, however, higher and lower orders of detection avoidance are “complements,” not substitutes. More of either order *increases* the productivity of the other. More cover-up of the cover-up, that is, makes the cover-up itself *more* productive, not less. Conversely, more cover-up makes covering up the cover-up more productive.

The detection avoidance principle does not, therefore, describe a situation in which we “tax” lower-order detection avoidance and thereby cause a substitution into higher. Because the relationship is complementary, taxing lower-order detection avoidance—and nothing else—ought to reduce higher-order detection avoidance. What’s happening rather is that the tax on lower-order detection avoidance simultaneously acts as a subsidy on higher-order avoidance. An additional dollar of sanction on first-order avoidance, for example, is in effect an additional dollar of reward for second.<sup>126</sup>

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<sup>122</sup> See, e.g., James N. Sanchirico, *Managing Marine Capture Fisheries with Incentive Based Price Instruments*, 3 PUB. FIN. & MGMT. 67, 69 (2003) (“The current suite of command and control regulations [e.g., gear and vessel restrictions, minimum size limits, catch limits, closed areas, and seasons] . . . increase[s] the costs of fishing, but in a manner that distorts the optimal allocation of resources.”).

<sup>123</sup> Bengt Holmstrom & Paul Milgrom, *Multitask Principal-Agent Analyses: Incentive Contracts, Assets Ownership, and Job Design*, 7 J.L. ECON. & ORG. 24, 25 (1991).

<sup>124</sup> Ayres & Levitt, *supra* note 51, at 44 & n.2; Clotfelter, *supra* note 51, at 392; Shavell, *supra* note 51, at 124.

<sup>125</sup> See Neal Kumar Katyal, *Deterrence’s Difficulty*, 95 MICH. L. REV. 2385, 2402–06 (1997) [hereinafter Katyal, *Deterrence’s Difficulty*] (suggesting possibility that such substitution occurred).

<sup>126</sup> Another important issue for analysis not considered in this Article is substitution across modes (rather than orders) of detection avoidance. Sanctioning one mode of avoid-

Third, the fact that orders of detection avoidance are complementary in the sense just described complicates, but does not fundamentally alter, the analysis. Taking account of complementarities, sanctioning cover-up, for instance, actually has two countervailing effects on cover-up of cover-up. First, as emphasized, the sanction on first-order cover-up acts as a reward for second-order cover-up. This reward encourages second-order cover-up. But, second, because sanctioning first-order cover-up discourages first-order cover-up itself, and because first- and second-order cover-up are complementary, sanctioning first-order cover-up will, through this indirect channel, *discourage* second-order cover-up. Thus, the direct effect of the first-order sanction—operating through the first-order sanction's other role as a second-order reward—is to encourage cover-up, while the *indirect* effect of the first-order sanction—operating through complementarities—is to discourage it. Either effect may predominate. Thus, incorporating complementarities, it is not possible to say whether sanctioning first-order cover-up will increase or decrease second-order cover-up. This is a more general statement of the qualification that sanctioning first-order cover-up encourages second-order cover-up *among those who still choose to engage in first*.

Yet, *any* measure that reduces first-order cover-up—whether that measure be a sanction on first-order cover-up or a technological *restructuring* of evidentiary process—benefits from the indirect reduction in second-order cover-up that operates through complementarities. The difference between the technological approach and the sanctioning approach is that the technological gives this benefit free reign, while the sanctioning approach quashes it by simultaneously subsidizing second-order detection avoidance.

Thus, when, as here, we are comparing policy measures that share the benefits of complementarities across orders of detection avoidance, we are justified in abstracting away from such complementarities and proceeding as if detection avoidance at each order is separately determined. This is, in fact, how we shall proceed throughout most of the remainder of the Article.

Fourth, even abstracting from complementarities, when we extend sanctioning beyond first-order detection avoidance to higher orders as well, we still encounter countervailing effects, albeit of a different nature from those related to complementarity. Each order of detection avoidance is simultaneously taxed and subsidized. The tax

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ance and not a second will generally cause substitution into the second. This may be beneficial if the first mode has substantially greater external costs than the second or is otherwise less socially desirable.

on  $n$ th-order cover-up is the sanction on  $n$ th-order cover-up. The subsidy is the sanction on  $n-1$ th-order cover-up. The net effect of this simultaneous tax and subsidy depends on the relative size of each, which is to say the relative size of the  $n$ th- and  $n-1$ th-order sanctions.

Fifth, extrapolating the immediately preceding point to the full sanctioning hierarchy, the net effect of the sanctioning regime on the *total* social waste of detection avoidance aggregated across all orders—our ultimate concern—depends on the extent to which sanctions are constant, increasing, or decreasing across orders of avoidance. Such is the subject of the next Part.

## V

### SANCTIONING HIERARCHIES

Deterring detection avoidance is, as argued in the preceding Part, not merely a matter of hammering it down with sanctions in the conventional manner. Rather, the enterprise is a bit more like the carnival game with moles, holes, and mallets. Clobber first-order avoidance with a sanction, and this causes second-order avoidance to pop its head out of some other hole. Knock second back down and third pops up somewhere else. Wallop third and up comes fourth.

After a few minutes of this one might understandably develop the conviction that what is needed is a mallet with an infinite number of heads to hammer all holes at once. In this Part we consider just this: simultaneously sanctioning all “orders” of detection avoidance (as well as the underlying violation).<sup>127</sup>

#### A. *Uniform Sanctions*

This section evaluates policies that apply the same level of sanction to all orders of avoidance. Due to its relative simplicity, this basic sanctioning hierarchy is a good place to start analytically. It is also a good starting point doctrinally: Criminal statutes applicable to certain egregious forms of detection avoidance read as if they do just this. All orders of perjury, including perjury about perjury about perjury about perjury, are potentially perjury and are sanctioned, in theory, to the same degree. The same holds for all orders of obstruction of justice.

Whether we truly do, or even could, impose a universal sanction on all orders of detection avoidance is open to serious question, as discussed later in this Part. But it is important to recognize that even were a universal sanction practicable, it would have contradictory effects, simultaneously discouraging *and* encouraging detection avoid-

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<sup>127</sup> As noted and justified in Part IV.B, the analysis in this section abstracts from complementarities across orders of detection avoidance.

ance. Indeed, to the extent that offenders balance the marginal costs and benefits of detection avoidance in deciding how much to engage in the activity, the net effect of a universal sanction would be to encourage detection avoidance.

In the explanation that follows, we focus on the effect on second-order detection avoidance of increasing a universal detection avoidance sanction. The same analysis applies to any higher order of detection avoidance.<sup>128</sup>

### 1. *Countervailing Effects*

Second-order detection avoidance has both a sanctions-increasing downside and a sanctions-reducing upside for the perpetrator. The sanctions-increasing downside results from the increased possibility of incurring a sanction for second-order detection avoidance activity itself. The more the offender engages in such activity, the greater the prevalence of evidentiary emissions therefrom, and, therefore, the greater her chance of getting caught. Of course, the magnitude of this downside also depends on the size of the sanction that is invited.

The sanctions-reducing upside of second-order detection avoidance is borne from the decreased possibility of incurring the sanction for *first-order* detection avoidance. It is correspondingly dependent on the size of the sanction that is avoided.

Increasing the universal sanction for detection avoidance increases both the sanctions-increasing downside and the sanctions-reducing upside of second-order detection avoidance. It makes second-order detection avoidance both more dangerous and more imperative.

Consider, for instance, the following stylized example, which we shall carry throughout the next several sections. Imagine that we increase the uniform fine from \$400,000 to \$1,000,000. We then also increase the expected benefit to the perpetrator of every one percentage point decrease in the chance of having to pay this fine for her first-order detection avoidance. For a risk-neutral perpetrator, for example, that value was formerly 1% of \$400,000, or \$4000. Now it is 1% of \$1,000,000, or \$10,000.

Conversely, we also increase the expected cost to the perpetrator of every one percentage point *increase* in the chance of having to pay this fine for her second-order detection avoidance itself: again from \$4000 to \$10,000. Additional second-order detection avoidance is, therefore, \$6000 more beneficial to the offender *for every percentage*

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<sup>128</sup> The analysis also applies to first-order detection avoidance if the primary activity sanction is the same as the uniform sanction for all orders of detection avoidance.

*point* that it reduces the probability of detection for first-order detection avoidance, and it is \$6000 more costly for every percentage point that it increases the probability of detection of itself.

In general, raising the universal sanction will increase the *per percentage point* upside of additional detection avoidance as much as it decreases the *per percentage point* downside.

## 2. *Sanctions' Dominant Effect on the Upside*

Whether increasing the universal sanction increases the upside of additional second-order detection avoidance more than the downside depends, therefore, on whether additional second-order avoidance decreases the chance of sanction for first-order avoidance by more percentage points than it increases the chance of sanction for second.

Returning to the numerical example, suppose, for instance, that \$1000 of additional second-order detection avoidance decreases the probability of sanction for first-order detection avoidance by two percentage points while increasing the probability of sanction for second-order detection avoidance by only one. We have already determined that increasing the universal sanction from \$400,000 to \$1,000,000 increases both the upside and downside of second-order detection avoidance by \$6000 per percentage point. Therefore, the upside of detection avoidance increases by \$12,000 and the downside by only \$6000. On net, therefore, the increase in the universal sanction encourages additional detection avoidance in this case.

What is happening here? Additional second-order avoidance both increases and decreases the likelihood of paying the uniform sanction. On net, however, it decreases this likelihood: It decreases the chance of detection for first-order avoidance more than it increases the chance of its own detection. Increasing the uniform sanction amplifies the benefits of this favorable net change in probabilities and so encourages additional second-order detection avoidance.

Of course, second-order avoidance decreases the likelihood of paying the uniform sanction in our example because we assumed that to be so. But this assumption is likely to hold in most cases. To see this, consider the violator's choice of second-order detection avoidance prior to the increase in the uniform sanction. Focus, in particular, on the last \$1000 that she chose to spend on second-order avoidance. (That is, focus on marginal second-order avoidance spending.) This \$1000 must have purchased something beneficial for the violator; otherwise, she would not have spent it. What it purchased was a reduction in the chance of having to pay the uniform sanction for first-order detection avoidance. To have induced her

expenditure, this reduction must have been greater than the increase in the chance of having to pay that same sanction for second-order detection avoidance. The same is likely to be true for the *next* \$1000: The reduction in the probability of having to pay the sanction for first-order avoidance is likely to still exceed the increase in the probability of having to pay the sanction for second.<sup>129</sup> In this case, additional spending on second-order detection avoidance will indeed effect a net reduction in the chance of having to pay the uniform sanction—a reduction that becomes more valuable when the sanction that is on net avoided is increased.

### B. Increasing Sanctions

If a uniform sanction fails to discourage detection avoidance, is there a nonuniform sanction structure that does the job? On a purely theoretical level, the answer is yes. The sanctioning hierarchy needs to be such that higher orders of detection avoidance are punished more severely. Unfortunately this purely theoretical solution is probably impossible to implement.

When we raised the uniform sanction in the previous section, the *per probability point* changes in second-order avoidance's upside and downside were equal. Thus, the fact that second-order avoidance effected a net decrease in the probability of sanction ruled the day. The way to fix this is to make the *per probability point* change greater for the downside than for the upside. And the way to do *this* is to raise the second-order sanction more than the first.

The simplest case is where we increase only the second-order sanction. This has no direct effect on the sanctions-reducing upside of second-order detection avoidance. On the other hand, it increases the sanctions-increasing downside. Therefore, it discourages second-order detection avoidance and appears to solve the problem identified in the previous Part.

But this approach quickly runs into several debilitating problems. The first is practical. Imposing different sanctions across first- and second-order detection avoidance activities supposes that the state can reliably distinguish between them. This is likely to be difficult. Especially so, given that we have thus provided the second-order perpetrator—caught for *some* detection avoidance—with an incentive to portray her avoidance activity as merely first-order in an effort to reduce her sanction.

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<sup>129</sup> On a technical note, if both probability functions are continuously differentiable, then this is certainly true for some spending increment, though perhaps one that is smaller than \$1000.

The second problem is theoretical, but also exacerbates the practical problem just described. When we further increase the sanction for second-order detection avoidance we also further increase the sanctions-reducing benefit of *third*-order detection avoidance. Again, the recursivity of the detection avoidance principle casts its shadow on an otherwise promising proposal.

In order to address this additional leakage, we would have to increase the sanction for third-order detection avoidance even more than the sanction for second. If we kept the first-order sanction at \$400,000 and raised the second-order to \$1,000,000, for instance, we might have to raise the third-order sanction to \$1,600,000. That, of course, will then encourage fourth-order detection avoidance, and the sanction for it will have to be raised by an even greater amount, perhaps from \$400,000 to \$2,000,000. In principle, this would proceed *ad infinitum*, producing an ever-increasing schedule of sanctions.

Thus, the necessity of ever-increasing fines compounds the practical problems discussed above. Distinguishing second-order detection avoidance from first is hard enough. Distinguishing fifth-order from, say, third is likely to be nearly impossible. Indeed, telling fifth-order detection avoidance from activities that are not detection avoidance of any order seems itself a nearly insurmountable difficulty.

### C. *Decreasing Sanctions*

The fact that higher orders of detection avoidance are likely to get lost in the crowd of daily activity leads to the very real possibility that not only is a series of ever-increasing sanctions impracticable, but that the best we can do is even worse than the uniform sanction considered in the first section of this Part. The best we can do, it would seem, is a sanctioning hierarchy that is—in effect, if not on paper—decreasing, with first-order avoidance sanctioned most severely, second-order less severely, third-order even less severely, and so on.

To some extent, this is reflected in current law. As noted above, criminal statutes dealing with perjury and obstruction do not make a distinction between first- and higher-order instances of their respective crimes. In practice, however, higher-order detection avoidance is more likely to be punished by a sentencing enhancement for the first-order obstruction, rather than by separate charge and conviction.<sup>130</sup>

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<sup>130</sup> There appear to be no reported cases in which the defendant is charged with perjury or obstruction and where the underlying proceeding was itself a prosecution for perjury or obstruction. There are, however, several reported cases in which a sentence for obstruction of justice was enhanced for further obstructive behavior. *See, e.g.,* United States v. Roche, 321 F.2d 607, 608 (6th Cir. 2003) (upholding trial court's increase of sentence for second-order obstructive behavior); United States v. Agoro, 996 F.2d 1288, 1292 (1st Cir.

These sentencing enhancements do make a distinction, generally imposing a lower punishment on higher-order avoidance. Thus, the advisory Federal Sentencing Guidelines provide for a sentencing enhancement for obstructing the investigation, prosecution, and sentencing of *obstruction of justice*. But the enhancement is only two offense levels, while the base offense level for obstruction is at least fourteen.<sup>131</sup> For a defendant with no criminal history sentenced at the midpoint of the guideline range, the second-order obstruction reduces the defendant's chance of spending at least eighteen months in jail on the primary obstruction offense in return for increasing her chance of spending an additional six months in jail.<sup>132</sup>

Arguably, higher orders of detection avoidance are punished even less. Although second-order detection avoidance is specifically treated in the sentencing guidelines, higher orders are not. By the most plausible reading of the guidelines, however, the enhancement is not two levels for each instance of higher-order obstructive behavior, but two levels for any amount of higher-order obstruction. Furthermore, it is arguably the case that *n*th-order detection avoidance will not be detected unless *n-1*th-order is as well—that the state usually cannot determine that someone is lying about having lied without first determining that she lied. In that case, there is in effect no additional sanction in the guidelines for third, fourth, or higher orders of detection avoidance. Indeed, while there are many reported cases in which a sentence for obstruction was enhanced for secondary obstruction,<sup>133</sup> there appear to be no reported cases additionally enhancing a sentence for third- or higher-order obstruction.

To the extent that the guidelines still guide, therefore, the federal system punishes first-order obstruction by eighteen months in prison, second-order by six, and third-, fourth-, fifth-, et cetera by zero. This downward slope between first and higher orders of detection avoidance has recently been steepened by those provisions in Sarbanes-

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1993) (same); *United States v. Lueddeke*, 908 F.2d 230, 234 (7th Cir. 1990) (same); *see also infra* note 131 (describing obstruction enhancement under federal sentencing guidelines).

<sup>131</sup> Compare U.S. SENTENCING GUIDELINES MANUAL § 2J1.2 (2005) with *id.* § 3C1.1. This is true even if the second-order obstruction results in a separate conviction. *Id.* § 3C1.1 cmt. n.8; *see also id.* § 2J1.3 cmt. n.2. The offense level for first-order obstruction can go as high as twenty-two when physical injury or property damage are involved, or higher in cases involving terrorism. *Id.* §§ 2J1.2(b), 2J1.3(b).

<sup>132</sup> Indeed, no matter what the criminal history and no matter where in each guideline range the judge chooses, the increase in prison time for second-order obstruction is always less than the prison time for first. One can see this by noting that for all criminal history categories, the lower bound sentence for offense level fourteen exceeds the difference between the upper bound for offense level sixteen and the lower bound for offense level fourteen. *Id.* ch. 5, pt. A (Sentencing Table).

<sup>133</sup> *See supra* note 130.

Oxley<sup>134</sup> that led the Sentencing Commission<sup>134</sup> to increase the offense level for first-order obstruction from twelve to fourteen without also increasing the enhancement in offense level for second-order obstruction, nor affecting at all the effective offense level enhancement for orders higher than two. Assuming, as above, midpoint sentencing and no criminal history, Sarbanes-Oxley increased the sentence for first-order obstruction by five months, the sentence for second-order obstruction by one month,<sup>135</sup> and the sentence for higher-order obstruction not at all. Thus, Sarbanes-Oxley has in this case steepened the decrease in the sanction as we move from order one to order three.

Another example of the proposition that the sanctioning hierarchy slopes downward in practice is the state criminal prosecution of Lil' Kim, referred to above, who lied to a New York state trial jury about having lied to the grand jury. Lil' Kim has never been indicted for her false statements *at trial*. At sentencing for her first-order perjury before the grand jury, though, the prosecutor requested a tougher sentence of two years and nine months on the basis of Lil' Kim's second-order lying at trial. In the end, however, making reference to Martha Stewart's ten month sentence for similar behavior, the judge sentenced Lil' Kim to only a year and a day.<sup>136</sup>

Therefore, the sanctioning structure that we can and actually do impose in the general case appears to be the opposite of what we would want to do theoretically. When the sanction for second-order detection avoidance is lower than the sanction for first, we effectively magnify the sanctions-reducing upside of second-order detection avoidance while dampening the sanctions-increasing downside. The same applies to detection avoidance of higher orders.

*D. Piggyback Sanctions: Adverse Inference Instructions, Burden Shifting, Investigative Policies, Et Cetera*

Sentences for perjury and obstruction are meted out in terms of monetary fines and imprisonment. But these are not the only possible currencies of punishment, nor are they the only ones actually employed. Several legal doctrines effectively punish detected detec-

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<sup>134</sup> See *supra* note 11 and accompanying text.

<sup>135</sup> The midpoint sentences for a violator with no criminal history are thirteen months for offense level twelve, eighteen months for offense level fourteen, and twenty-four months for offense level sixteen. Thus, an increase of two offense levels from twelve to fourteen (as would have occurred pre-Sarbanes-Oxley) increases the midpoint sentence by five months, while an increase of two levels from fourteen to sixteen (as now occurs) increases the midpoint sentence by six months. U.S. SENTENCING GUIDELINES MANUAL ch. 5, pt. A (Sentencing Table).

<sup>136</sup> Preston, *supra* note 115.

tion avoidance by increasing the chance of punishment for the underlying violation.

Consider again the case in which, sued for aiding and abetting fraud, Morgan Stanley stonewalled in discovery. The court initially sanctioned Morgan by shifting the burden of proof. Ordinarily, the plaintiff would have had to prove with a preponderance of the evidence that Morgan did indeed aid and abet fraud. Following the court's initial ruling, Morgan had to prove that it did *not*. The court also specified in its initial ruling that a "statement of evidence" was to be read to the jury explaining that Morgan's stonewalling was relevant to its consciousness of guilt and to the appropriateness of punitive damages.<sup>137</sup> When Morgan's obstructive behavior continued after this initial ruling, the court amended its order to add a more severe penalty of similar form: Essentially, the jury was to take as given that Morgan had aided and abetted the fraud, and was to decide only the issue of whether the plaintiff was in fact influenced and harmed thereby.<sup>138</sup>

All three of the sanctions in the Morgan case—shifting the burden of proof, adversely instructing the jury, and taking adverse facts as given—act in a similar way. They do not impose separate sanctions on detection avoidance, as do the crimes of perjury and obstruction. Rather, they sanction detection avoidance by effectively increasing the probability of sanction for the conduct whose detection is being avoided. Shifting the burden of proof onto the defendant means that all those cases wherein neither party would be able to meet the burden are now cases where the defendant, rather than the plaintiff, loses. A nudging instruction suggesting an adverse inference from the defendant's "spoliation"<sup>139</sup> increases the chance that liability is imposed to the extent that the jury is impressionable, sensitive to the cue, or simply would not have thought of the evidence in the

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<sup>137</sup> *Coleman (Parent) Holdings, Inc. v. Morgan Stanley & Co.*, No. CA 03-5045 AI, 2005 WL 674885, at \*5 (Fla. Cir. Ct. Mar. 23, 2005) (describing Adverse Inference Order). It is not clear from this opinion precisely which burden was shifted—production, persuasion, or both.

<sup>138</sup> *Id.* at \*9; *see also id.* at \*22–23 (describing allegations jury was to take as established).

<sup>139</sup> "Spoliation" is a broad term including the destruction, suppression, or concealment of tangible evidence as well as flight from the scene of the crime or from the jurisdiction. *See, e.g.*, 22 CHARLES ALAN WRIGHT & KENNETH W. GRAHAM, JR., *FEDERAL PRACTICE AND PROCEDURE* §§ 5178, 5181 n.1 (Supp. 2005) (describing several examples of spoliation). Spoliation is sometimes referred to as "badges of fraud" or "badges of guilt." *See generally, e.g.*, Samuel W. Buell, *Novel Criminal Fraud*, 81 N.Y.U. L. REV. (forthcoming Dec. 2006) (advocating use of "badges of guilt" to determine consciousness of "wrongdoing" to, in turn, determine guilt in white collar crime cases where novel behavior is not clearly fraudulent under existing law).

manner suggested. And taking adverse facts as given increases from possible to certain the chance that those facts will be taken as true.

A sanction of similar effect is meted out by investigators and prosecutors, rather than judges, and is the by-product of directing investigative resources for underlying violations toward cases that show evidence of obstruction. The SEC, for example, might explicitly announce a kind of counterpunch strategy: Should it come across evidence of obstructive behavior in the course of investigating insider trading, for instance, it would respond by stepping up the investigation of the insider trading. There is some evidence that the SEC and other regulatory bodies do follow such a policy.<sup>140</sup>

The seemingly compelling notion behind this kind of obstruction targeting of investigative resources is that it renders obstruction ineffectual. Obstructive behavior designed to foil a given level of detection effort by the regulator simultaneously increases the regulator's

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<sup>140</sup> Carberry & Gordon, *supra* note 38, at 1 ("Securities crimes that include evidence of obstruction are . . . more likely to be prosecuted . . . . [A]s in the perjury and obstruction cases, the falsification of records or filings will be a factor weighing heavily toward prosecution, even if the conduct being covered up, standing alone, would not be prosecuted."). Federal prosecutors have been advised that obstructive behavior by corporations may merit indictment:

Another factor to be weighed by the prosecutor [in deciding whether and how to prosecute] is whether the corporation, while purporting to cooperate, has engaged in conduct that impedes the investigation (whether or not rising to the level of criminal obstruction). Examples of such conduct include: overly broad assertions of corporate representation of employees or former employees; inappropriate directions to employees or their counsel, such as directions not to cooperate openly and fully with the investigation including, for example, the direction to decline to be interviewed; making presentations or submissions that contain misleading assertions or omissions; incomplete or delayed production of records; and failure to promptly disclose illegal conduct known to the corporation.

Memorandum from Larry D. Thompson, Deputy Att'y Gen., U.S. Dep't of Justice, to U.S. Attorneys, Regarding Principles of Federal Prosecutions of Business Organizations 8 (Jan. 20, 2003), [http://www.usdoj.gov/dag/cftf/business\\_organizations.pdf](http://www.usdoj.gov/dag/cftf/business_organizations.pdf). The defense bar has remarked on such policies:

[M]any in the defence bar believe . . . the SEC [has] become more aggressive in requesting waivers of attorney-client privilege and in using the stick of higher penalties for non-co-operation against corporations it is investigating.

.....  
[The SEC's director of enforcement] got some heat from fellow panelists who made it clear they view the increasingly regular demands of SEC staff and U.S. Justice Department officials with frustration and alarm.

They said frequent requests for waiver of privilege and the expectation that internal information will be shared, coupled with the high cost of non-co-operation, are eroding lawyers' ability to do their jobs.

Sandra Rubin, *Whose Lawyer Are You Now?*, NAT'L POST (Can.), Nov. 24, 2004, at FP12 (reporting on panel discussion during Practising Law Institute's annual securities conference).

level of detection effort, to the extent that such obstructive behavior is itself detected. The intended effect is presumably to neutralize the impact of obstructive behavior on the probability of detection for the underlying violation.

This policy is similar in effect to burden shifting, nudging instructions, and taking facts as given. The regulator's counter-responsive increase in detection effort acts as a sanction on obstructive behavior. The sanction, an increase in the probability of detection for the underlying wrong, rides on the back of the lower-order sanction.

In evaluating all such piggyback sanctions, the first thing to note is that, despite their initial appeal, such piggyback sanctions are subject to the same basic problem as directly sanctioning detection avoidance. They too are susceptible to the recursive nature of the detection avoidance principle. Such policies condition a negative consequence on detection of detection avoidance. Thus, while they do discourage detection avoidance in the first instance, they also encourage the detection avoider to avoid detection of her detection avoidance. In contrast to perjury and obstruction, the negative consequence for the perpetrator is not a separate, higher-order sanction, but rather an increased chance of being sanctioned for the lower-order wrong. But this distinction is irrelevant to the recursion problem. All that matters is that the consequence of the detection avoidance is negative and that it is conditioned on detection of the detection avoidance.

In fact, piggyback sanctions not only fail to avoid the recursion problem, they actually exacerbate it. Such sanctions create, in effect, a sanctioning hierarchy that imposes a lower sanction on higher orders of detection avoidance. As we saw in the previous section, a decreasing hierarchy of sanctions encourages detection avoidance. Recall that when the sanction for first-order detection avoidance is greater than the sanction for second-order detection avoidance, the sanction that second-order avoidance avoids is greater than the sanction that it invites. Accordingly, second-order detection avoidance is encouraged on net.

Applied as well to second-order detection avoidance, piggyback sanctions work as follows. If the individual is caught for first-order detection avoidance (the "underlying wrong" with respect to second-order detection avoidance), she incurs the sanction therefor. If the individual is caught for second-order detection avoidance, her effective sanction is an increase in the likelihood that she will incur the sanction for first-order detection avoidance. The latter sanction is always smaller. Punishing someone by definitely sanctioning them (in

the event of detection) is more severe than punishing them by increasing *the chance* that they will have to pay that same sanction.<sup>141</sup>

The same analysis applies to first-order detection avoidance, a more familiar context for piggyback sanctions. For every percentage point that destroying documents reduces the chance of liability, the defendant saves one percent of the damages that would be imposed. For every percentage point that the document destruction increases the chance of having to suffer an adverse jury instruction, the defendant incurs a cost equal to one percent of the value of the instruction-induced increase in the chance of having to pay the same damages. The effect of such an implicitly decreasing sanctioning structure, taken as a whole, is to induce detection avoidance, not deter it.<sup>142</sup>

## VI

### THE TECHNOLOGICAL APPROACH AND ITS QUIET PREVALENCE

All of these problematic approaches to detection avoidance condition negative consequences for the avoider on the detection of her detection avoidance, thereby encouraging higher-order avoidance just as they discourage lower.

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<sup>141</sup> For example, suppose that the sanction for first-order detection avoidance is \$500,000 and suppose that the punishment for second-order detection avoidance is an increase in the chance of having to pay this \$500,000 from 50% to 90%. Then the effective sanction for second-order detection avoidance is 40 percentage points of \$500,000, or \$200,000, which is, of course, less than \$500,000.

<sup>142</sup> Apart from the question of whether detection avoidance should be punished is the question of whether evidence of detection avoidance should be admissible without judicial comment as evidence of the *actus reus* or *mens rea*. Certainly such evidence is relevant in both respects. But relevance is only a necessary condition for admissibility, and many relevant forms of evidence, such as character evidence and hearsay, are inadmissible. Certainly admitting such evidence would shore up deterrence of the underlying violation, but the question remains whether admissibility is the most cost-effective way to do so. The analysis in this section suggests that, whatever its other disadvantages and advantages, admitting detection avoidance as evidence is unlikely to reduce detection avoidance itself. In this respect, admissibility also operates as a form of piggyback sanctioning.

This may help to explain why evidence of flight when offered to prove the *actus reus* is more apt than many forms of evidence to be held inadmissible as more prejudicial than probative. See WRIGHT & GRAHAM, *supra* note 139, § 5181 & nn.3 & 5 (noting concern with circularity when: (a) defendant's actions are interpreted as flight partly on basis of suspicion that defendant is guilty, and then (b) such actions, so interpreted, are used to prove that defendant is guilty); *id.* § 5181 & n.53 (noting concern for jury overvaluation of flight evidence).

The primary activity incentive effects of using detection avoidance to prove *mens rea*, on the other hand, are uncertain, given the uncertain primary activity incentive justification for the *mens rea* requirement itself. See generally Shavell, *supra* note 107, at 1247-49 (examining possible primary activity incentive justifications for *mens rea* requirement).

But sanctioning an activity is not the only approach to discouraging it. Against her private benefits from the violation the potential violator weighs *two* sorts of costs: not just the expected cost of sanctions, but also the “direct cost” of realizing the activity’s private benefits. In lieu of imposing legally constructed costs on an activity, therefore, the law can potentially discourage an activity by increasing its direct cost.

In the case of detection avoidance, this direct approach attacks the “technology” by which offenders convert their time, effort, and expenditure into reductions in the probability of detection. The point of attack is the design of evidentiary process, inclusive of investigative techniques and policies.

Decreasing the technological productivity of law violations is a time-honored strategy in public and private enforcement. Steel vaults increase the cost of bank robbery. Steering wheel locks increase the cost of car theft. Airport security increases the cost of hijacking.<sup>143</sup> Considering the technological approach in the specific context of detection avoidance yields two important observations.

First, the technological approach to detection avoidance avoids the recursivity problem that specially plagues attempts to sanction such activities. Thus, the technological approach has a special advantage over sanctioning in the case of detection avoidance that is not also present in the case of underlying violations like bank robbery, car theft, and hijacking.

Second, as this first factor may help to justify and explain,<sup>144</sup> and despite appearances, the law does in practice rely more on the direct

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<sup>143</sup> For recent manifestations of this idea see Neal Kumar Katyal, *Architecture as Crime Control*, 111 YALE L.J. 1039, 1043 (2002) [hereinafter Katyal, *Architecture*] (arguing that “increasing an area’s natural surveillance (its visibility and susceptibility to monitoring by private citizens), introducing territoriality (by demarcating private and semiprivate spaces), reducing social isolation, and protecting potential targets” can deter crime by increasing cost of perpetration), and Katyal, *Deterrence’s Difficulty*, *supra* note 125, at 2439–41 (proposing methods to increase cost of dealing and buying drugs). Katyal also explores strategies to increase the technological cost of computer crime:

[Such strategies can be classified into] first-party strategies (preventing offenders from committing acts by raising perpetration costs and legal risks), second-party strategies (encouraging victims to protect against attacks, thereby making it more expensive for criminals to commit crimes and easier for them to get caught), and third-party strategies (relying on ISPs and other entities to monitor risky activity and forestall attacks through architectural solutions).

Neal Kumar Katyal, *Criminal Law in Cyberspace*, 149 U. PA. L. REV. 1003, 1012–13 (2001) [hereinafter Katyal, *Cyberspace*].

<sup>144</sup> Another reason that the technological approach is especially suited to detection avoidance is that the technology of detection avoidance is relatively pliable. The technology of detection avoidance is intimately determined by the state itself in the manner in which it designs adjudication. The levers of state influence are thus more solidly attached

approach and less on sanctions with regard to detection avoidance as compared to primary activity violations.

The current Part argues that sanctions actually play a more limited role in current enforcement than may at first be apparent. Part VII explains the mechanics of the technological approach, with special attention to its advantages over sanctioning. And Part VIII explains what practical steps the law can and does take to dampen the productivity of detection avoidance.

Indictments and convictions for perjury and obstruction are relatively sensational events and so more likely than most aspects of evidentiary procedure to appear in headlines. But a deeper analysis of evidentiary procedural law reveals that perjury, obstruction, and sanctioning in general do not constitute the law's primary approach to detection avoidance. In fact, the law quietly disfavors the sanctioning approach, opting instead for a technological attack on the productivity of detection avoidance spending.

First, much detection avoidance is not criminal, nor even subject to procedural sanction. Grossly misleading yet technically true statements are generally not perjurious, for example.<sup>145</sup> The privilege against self-incrimination removes from the purview of criminal contempt the individual's choice to avoid aiding detection of her own criminal actions by remaining silent in the face of official questioning.<sup>146</sup> Document destruction, witness coercion, and other forms of obstructive behavior are usually not criminal unless they are targeted toward a specific official proceeding or investigation. In some cases, that proceeding or investigation must have already com-

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and more deeply seated for detection avoidance than for most other regulated activities. Cf. Katyal, *Architecture*, *supra* note 143, at 1043 (suggesting that physical architecture can also be designed to decrease productivity of criminal activity); Katyal, *Cyberspace*, *supra* note 143, at 1012–13 (examining strategies to increase technological cost of computer crimes).

<sup>145</sup> *Bronston v. United States*, 409 U.S. 352, 357–58 (1973) (holding that statement must be literally false to be perjurious under 18 U.S.C. § 1621); *United States v. Reveron Martinez*, 836 F.2d 684, 689 (1st Cir. 1988) (extending holding in *Bronston* to 18 U.S.C. § 1623).

<sup>146</sup> U.S. CONST. amend. V (providing right against compelled self-incrimination); *Murphy v. Waterfront Comm'n*, 378 U.S. 52, 55 (1964) (stating that privilege against self-incrimination reflects “our unwillingness to subject those suspected of crime to the cruel trilemma of self-accusation, perjury or contempt”). In addition, in a criminal case the judge may not issue an adverse inference instruction, nor may the prosecutor comment on the defendant's silence. *Griffin v. California*, 380 U.S. 609, 615 (1965) (prohibiting adverse inference instruction); *see also United States v. Grosz*, 76 F.3d 1318, 1326 (5th Cir. 1996) (confirming prohibition on prosecutorial comment). *But see Baxter v. Palmigiano*, 425 U.S. 308, 318 (1976) (protection against adverse inference instruction does not extend to civil cases).

menced.<sup>147</sup> In most cases, it must at least be specifically anticipated.<sup>148</sup>

A similar pattern characterizes procedural, as opposed to criminal, sanctions. Only egregious stonewalling in discovery is sanctionable; Morgan Stanley's recent comeuppance, as described above, is atypical.<sup>149</sup> Federal Rule of Civil Procedure 11, which, inter alia, sanctions civil defendants who deny in their answers factual assertions that they know to be true, is generally regarded as "toothless."<sup>150</sup> And evidence destruction in the context of an ongoing "document retention policy" is neither criminally obstructive, nor grounds for burden shifting, nor even grounds for an adverse inference instruction.<sup>151</sup>

Second, what evidence there is suggests that sanctions are rarely imposed even when detection avoidance rises to a sanctionable level. The view that sanctionable detection avoidance is rampant and that the law most often looks the other way is surprisingly ubiquitous among scholars, attorneys, and judges.<sup>152</sup> There have even been attempts to support this view with systematic empirical evidence,<sup>153</sup>

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<sup>147</sup> *United States v. Aguilar*, 515 U.S. 593, 600–01 (1995) (holding that false statements to investigating agent are not perjury where it is uncertain that agent will testify before grand jury); Oesterle, *supra* note 28, at 1201 ("[18 U.S.C. § 1503] apparently allows parties to destroy any documents, even those relevant to future civil actions, if the destruction occurs before the complaint is filed.").

<sup>148</sup> *See, e.g.*, *Arthur Andersen LLP v. United States*, 544 U.S. 696, 708 (2005) (holding that knowingly corrupt persuader within meaning of 18 U.S.C. § 1512(b) (2000) "cannot be someone who persuades others to shred documents under a document retention policy when he does not have in contemplation any particular official proceeding in which those documents might be material").

<sup>149</sup> *See* Oesterle, *supra* note 28, at 1188 (arguing that "existing laws on the consequences of document destruction are too lenient"). *But see* Nesson, *supra* note 28, at 806 ("Existing rules are more than adequate.").

<sup>150</sup> U.S. SUPREME COURT, AMENDMENTS TO FEDERAL RULES OF CIVIL PROCEDURE, reprinted in 146 F.R.D. 401, 507 (1993) (Scalia, J., dissenting) (dissenting from adoption of amendments on grounds that they would weaken FED. R. CIV. P. 11).

<sup>151</sup> *Arthur Andersen*, 544 U.S. at 704 ("It is, of course, not wrongful for a manager to instruct his employees to comply with a valid document retention policy under ordinary circumstances."); *cf.* *Lewy v. Remington Arms Co.*, 836 F.2d 1104, 1112 (8th Cir. 1988) (requiring for purposes of providing spoliation instruction under court's inherent powers that document retention policies be, inter alia, "reasonable"). *But see* Sanchirico, *Evidence Tampering*, *supra* note 28, at 1275–78 (questioning relevance of *Lewy* despite its frequent citation in scholarly literature).

<sup>152</sup> *See, e.g.*, POSNER, *supra* note 60, at 147 (noting judges' "ambivalence about perjury in civil litigation"); Nesson, *supra* note 28, at 806 ("[I]n practice, judges are extremely reluctant either to expose discovery violations or to punish discovery violations once exposed, applying the rules instead in ways that minimize or avoid the problem." (citing Note, *The Emerging Deterrence Orientation in the Imposition of Discovery Sanctions*, 91 HARV. L. REV. 1033, 1034, 1038–39 (1978))); Harris, *supra* note 28, at 1771–72 (describing resigned attitude of judges and lawyers toward perjury); *see also* Sanchirico, *Evidence Tampering*, *supra* note 28, at 1230 (describing this general agreement).

<sup>153</sup> *See supra* note 62.

though a close examination of these findings casts serious doubt on their relevance.<sup>154</sup>

What explains the law's apparent indifference toward sanctioning procedural crimes and violations? Some commentators ascribe the attitude to the generally held view "that the court system has been designed, or at least has evolved, to be robust in the face of the known inefficacy of the oath and of the threat of prosecution for perjury [and obstruction] and as a result the frequency of these crimes."<sup>155</sup> Such robustness implicates deep structural features of evidentiary procedure that reduce the technological productivity of detection avoidance, features that are ubiquitous in the design and daily practice of legal process, as detailed in Part VIII.

## VII

### MECHANICS OF THE TECHNOLOGICAL APPROACH

Before examining specifically what the law can and does do to reduce the productivity of detection avoidance, it is worth clarifying what such productivity reductions accomplish and why they are likely to be superior to sanctioning.

#### A. *Effect on Detection Avoidance*

Reducing the returns from an investment reduces the amount that individuals invest therein. In the same way, reducing the return from detection avoidance reduces the resources that detection avoiders devote to avoiding detection.

In more detail, imagine that an offender, having violated the law, is now deciding whether or not to spend some fixed amount of

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<sup>154</sup> Sanchirico, *Evidence Tampering*, *supra* note 28, at 1231–39 (critiquing studies on sanctionable detection avoidance and their use in legal scholarship).

<sup>155</sup> POSNER, *supra* note 60, at 147. Harris writes:

Increasingly, the attitude of judges and lawyers toward perjury is one of acceptance and tolerance. They have resigned themselves to the fact that perjury is an inevitable outcome of an adversarial system of justice which the legal system may just have to tolerate. Furthermore, prosecutors do not believe that it is a serious problem they need to be concerned with. They point out that it is the jury's job as the factfinder to assess the credibility of the witnesses and evidence and ascertain the truth. By the end of a trial, unreliable testimony and evidence have been rejected, truthful testimony and evidence considered, and an outcome determined. Because most prosecutors believe that the problem of perjury has been resolved by the conclusion of the trial, they argue that it is a waste of valuable resources to then pursue perjury charges arising out of that proceeding, rather than committing those resources to investigating and prosecuting more important crimes that are overloading the court's docket.

Harris, *supra* note 28, at 1771–72 (footnotes omitted).

money—say \$100,000—on detection avoidance.<sup>156</sup> Whether this makes sense for her depends on what she gets in return. This, in turn, depends on several factors. If we imagine that detection avoidance is itself not separately sanctioned, then two factors predominate.

The first factor is the magnitude of the sanction that will be imposed upon detection of the underlying violation. The second factor is the “productivity” of the detection avoidance spending in question: the amount by which the \$100,000 expense reduces the probability that the underlying violation will be detected.

Increasing either the sanction or the productivity of detection avoidance increases the return from the \$100,000 detection avoidance expenditure. The larger the sanction, the more valuable each percentage point reduction in the detection probability. The greater the percentage point reduction, the more units of this valuable percentage point reduction are procured.

Conversely, therefore, *reducing* the productivity of detection avoidance is one way to discourage the violator from spending the \$100,000. If, for example, the sanction on the underlying violation is fixed at \$1,000,000, then the risk-neutral violator values each percentage point reduction in the probability of sanction at \$10,000. She will then spend the \$100,000 on detection avoidance only if doing so reduces the probability of detection by at least ten percentage points. The object of the technological approach—as manifest in this simple example—is conspicuously to bring the productivity of detection avoidance down below ten percentage points, so that the offender decides not to spend the \$100,000.<sup>157</sup>

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<sup>156</sup> A more general case is where the offender may spend any amount on detection avoidance. In this broader context, the technological attack operates by reducing, at all points, the marginal productivity of detection avoidance spending, defined loosely to be the change in the probability of detection per additional dollar spent on detection avoidance.

<sup>157</sup> Two technical notes are in order. First, if only some orders of detection avoidance are affected in the first instance by the technological attack, will this induce a compensating increase in expenditure on other orders? Not likely. As noted in Part IV.B, *supra*, orders of detection avoidance activity are, if anything, complements, not substitutes. Reducing the productivity of some orders of detection avoidance and not others reduces spending on all orders of detection avoidance. Lower effort expended on orders whose productivity has been directly reduced by policy is likely to indirectly lower the productivity and the expenditure on excluded orders as well. The sanctioning approach also benefits from this complementarity. Unlike the technological approach, however, it squanders this benefit by simultaneously and directly encouraging higher orders of detection avoidance. For more on this, see the discussion of complementarity in Part IV.B, *supra*.

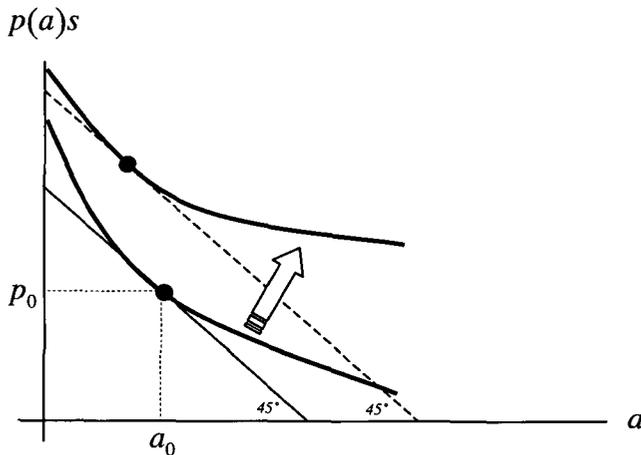
Second, what about the “income effect”? When we increase the price of apples the consumer may respond by consuming more apples if the income effect for apples is negative and dominant. When the income effect is negative, the poorer the individual, the more apples she consumes. Increasing the price of apples, *inter alia*, makes her poorer.

### 1. Diagrammatic Approach

A simple diagram, combined with some rudimentary marginal analysis, may help to clarify the nature and effect of the technological attack on detection avoidance. (This section and the next, which are somewhat more technical, can be skipped without disrupting the flow of the article.)

Imagine, for simplicity, that there are no sanctions for detection avoidance and that the sanction for the underlying activity is fixed. Further suppose that individuals are risk neutral, so that they value the imposition of a sanction  $s$  with probability  $p$  as equivalent to paying out  $ps$  dollars for certain. The product  $ps$  is the expected sanction.

FIGURE 1  
INTENSIFYING THE TECHNOLOGICAL ATTACK FLATTENS  
THE EXPECTED SANCTION CURVE.



The horizontal axis in Figure 1 depicts the detection avoidance effort  $a$  (in dollars) of an individual who has committed the underlying violation. The vertical axis depicts the expected sanction for the underlying violation, the product of the probability of detection for the underlying violation  $p(a)$  and the sanction for the underlying violation  $s$ . The downward sloping line(s) (focus on the lower one for

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Isn't it then possible that the offender will respond by increasing detection avoidance spending when its productivity declines? Unlikely. The analogy to apple pricing is actually inapt. A better analogy for lowering the productivity of detection avoidance is lowering the marginal utility of apples. When we lower the marginal utility of apples, there is no income effect and the consumer consumes fewer apples (assuming that doing so does not substantially lower the marginal utility of other goods).

now) shows the inverse relationship between detection avoidance spending  $a$  and the expected sanction: The more the individual spends on detection avoidance, the lower the probability of detection, and so the lower the expected sanction. This line is in a sense the "production function" for detection avoidance. It summarizes the "technology" of avoidance, where detection avoidance spending is the input, and a reduced expected sanction is the output.

Notice that detection avoidance is assumed to reduce the expected sanction at a decreasing rate. This reflects the assumption that detection avoiders employ the most productive avoidance measures first and reach deeper down into the barrel as they spend more and more on avoidance.

Under these assumptions, the upside of avoidance for the detection avoider is the reduction in the expected sanction. The downside is the direct cost of the avoidance. How much will a violator spend on avoidance? Let us suppose that the violator wishes to minimize the sum of the expected sanction and the cost of the avoidance. In that case she will set the marginal reduction in the expected sanction equal to the marginal cost of an additional dollar of detection avoidance spending (which is one dollar by definition). Therefore, she will choose her detection avoidance activity at a point where the slope of the curve equals  $45^\circ$ . For the lower curve, this is the point corresponding to  $a_0$  on the horizontal axis and  $p_0$  on the vertical.

The technological approach to reducing detection avoidance reduces the marginal productivity of detection avoidance activity. It therefore flattens the curve describing the relationship between avoidance and expected sanction (without lowering, and possibly even raising, its level at  $a=0$ ). Such flattening is depicted by the upper curve in the figure. If the upper curve now describes the violator's tradeoff between detection avoidance spending and reductions in the probability of detection, then she spends less on detection avoidance. The slope of this flatter curve flattens to a slope of  $45^\circ$  at a lower level of detection avoidance expenditure.

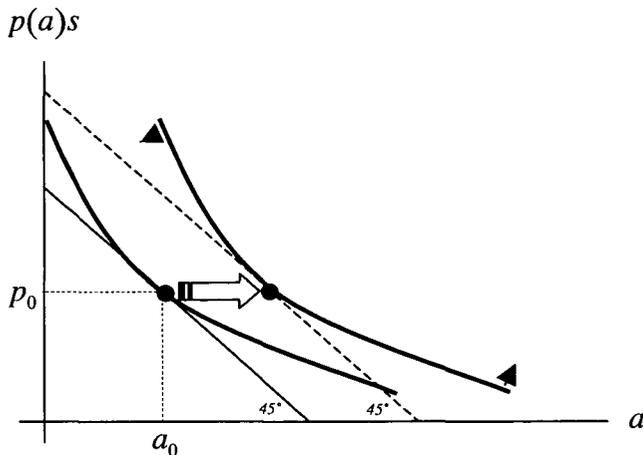
## 2. *Decreasing the Marginal Productivity of Avoidance Effort Versus Increasing the Marginal Cost of Avoiding Detection*

The technological approach is not merely a matter of making detection avoidance harder. That is, it is not merely a matter of increasing the cost of reducing the probability of detection by an additional percentage point. Doing just this may lead violators to *try* harder, and thereby to increase, rather than decrease, the expenditure of resources on detection avoidance.

The technological approach requires something more: that the *productivity* of avoidance effort and expenditure be reduced. To reduce the productivity of detection avoidance is to reduce the number of percentage points by which an additional dollar of detection avoidance reduces the probability of detection. This stricter requirement implies, but is not implied by, an increase in the cost of reducing the probability of detection.

All this can be seen in Figure 2.

FIGURE 2  
INCREASING THE MARGINAL COST OF DETECTION PROBABILITY  
REDUCTIONS MAY INCREASE THE MARGINAL PRODUCTIVITY  
OF DETECTION AVOIDANCE.



A rightward horizontal shift of the expected sanction curve keeps the slope of that curve constant at each probability  $p$ . Therefore, it holds the marginal cost of reducing the probability of detection constant at each  $p$  along the vertical axis. At the same time, because the curve decreases at a decreasing rate, the rightward shift *steepens* the curve at each level  $a$  of detection avoidance spending along the horizontal axis. The shift, therefore, *increases* the marginal productivity of detection avoidance across the board.

This shows that it is possible to strictly increase the marginal productivity of detection avoidance while keeping the marginal cost of detection avoidance constant. It follows that strictly increasing the marginal productivity of detection avoidance is also consistent with *strictly increasing* the marginal cost of detection avoidance. The right shifted curve need only be rotated counterclockwise slightly, as indicated by the small arrows.

Therefore, knowing only that a measure increases the marginal cost of avoidance, one cannot conclude that it reduces the marginal productivity of avoidance.<sup>158</sup> One cannot, thus, conclude that the measure discourages spending on detection avoidance.

### 3. *Bounded Rationality*

Do people really behave as depicted in the foregoing analysis? Returning to the numerical example discussed at the start of Part VII.A, perhaps the violator has it in her mind that she is going to spend \$100,000 on detection avoidance irrespective of its productivity. Or perhaps she is dedicated to reducing the probability of detection by ten percentage points whatever the cost, in which case the less productive her spending, the more she will spend to accomplish her goal.

Such boundedly rational decisionmaking may indeed affect the efficacy of the technological attack. But ultimately the analysis here is comparative. Departures from rationality also affect the efficacy of a sanctioning approach to detection avoidance. If violators do not respond to productivity decreases, why should they respond to sanctions? Why would a violator account for costs probabilistically imposed upon her by the state as sanctions for her misdeeds, but not costs that she purposefully and directly imposes upon herself by choosing to engage in detection avoidance?<sup>159</sup>

#### *B. Effect on Deterrence of Underlying Violations*

The technological approach not only discourages detection avoidance, it also enhances deterrence of the underlying violation. The legal sanction on the underlying violation has less deterrent force if there is an easy way around it. Conversely, blocking that dodge—or at least increasing its cost—increases the sanction's impact.

Suppose, for example, that \$11,000 of detection avoidance decreased the probability of detection of the underlying violation by ten percentage points. Given a sanction of \$1,000,000, such an expenditure would be worthwhile. And in making it the offender would be effectively substituting an \$11,000 payment (in the form of detection

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<sup>158</sup> Conversely, however, one can show that a decrease in the marginal productivity of detection avoidance does imply an increase in its marginal cost.

<sup>159</sup> There is in fact a growing body of econometric evidence indicating that offenders as a group do indeed respond to the possibility of sanction by reducing underlying violations. Levitt & Miles, *supra* note 23 (manuscript at 18–23) (reviewing advances in testing for deterrent effect of laws). If the behavioral association between raising sanctions and reducing productivity is valid, this body of evidence would presumably also imply that offenders respond to decreasing the productivity of detection avoidance by engaging less in the activity.

avoidance spending) for a \$100,000 payment (in the form of a reduction in the expected sanction). This favorable substitution would lower the total expected cost of the underlying violation by \$89,000.

Now suppose that we are able to reduce the productivity of \$11,000 of detection avoidance spending from ten percentage points to one, so that the reduction in expected sanction is only \$10,000. The offender would no longer find the detection avoidance spending worthwhile. More to the present point, however, money spent on detection avoidance would not operate to decrease the total expected cost of the underlying violation. After the productivity reduction, the cost of the violation would effectively be \$89,000 greater.<sup>160</sup>

### C. Public Detection Costs

Reducing the productivity of detection avoidance is not all good news. Productivity reductions are likely to come at the price of additional public detection costs. Decreasing the effectiveness of the detection avoidance dollar may, for example, require more costly surveillance systems or more lengthy and numerous interrogation sessions. These enhancements are costly not just for the resources they require, but also for the additional opportunities for abuse that they create.

But these additional costs hardly defeat the argument for the technological approach, for the sanctioning approach is *also* likely to require additional public detection costs. Sanctioning efforts to obstruct primary process—whether by use of procedural rules or by the criminal law—requires additional, costly process.

To be sure, economies of scale may reduce the cost of such higher-order process. Prosecutors can and reportedly do pile obstruction and perjury charges onto primary activity indictments.<sup>161</sup> When a suspect on some underlying violation is also suspected of obstructing justice, some of the costs of investigating and adjudicating the obstruction can be shared with prosecution of the primary violation.

Yet the additional costs of prosecuting procedural violations are still likely to be substantial. The *actus reus* of obstruction is often

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<sup>160</sup> In fact, decreasing the productivity of detection avoidance increases deterrence of the underlying wrong even if it does not discourage detection avoidance, as can be seen in the example by positing that the productivity of detection avoidance is lowered from ten to nine probability points.

Of course, lowering the productivity of detection avoidance can never increase the effective sanction above a 100% probability of paying the sanction itself. Spending nothing on detection avoidance is always an option. But again the analysis is comparative, and the sanctioning approach to detection avoidance shares the same limitation.

<sup>161</sup> See Oesterle, *supra* note 28, at 1204 (discussing ease and benefits of adding perjury charges to ongoing criminal cases).

quite different from the actus reus of the underlying crime. The obstructive act is apt to have occurred at a different time and place with a different set of potential witnesses and a different array of alibis. In fact, if the piling-on effect is real and recognized, obstructers have an incentive to craft their evidentiary misdeeds in such a way as to prevent scale economies in prosecution.

Moreover, the *mentes rea*e of obstruction crimes are orthogonal to those of the underlying wrong. Proving that a defendant obstructed justice generally requires proving that she had in mind a particular ongoing or imminent proceeding or investigation and that her intentions were “wrongful.”<sup>162</sup> Proving that a witness committed perjury requires showing not just that her statement was false, but also that the falsity was willful or at least knowing, a showing that typically requires additional investigation, evidence, and deliberation.<sup>163</sup>

Furthermore, detection avoidance that occurs far downstream along the procedural flow—as opposed to detection avoidance that can be charged in the original indictment or claimed in the original complaint—will often require separate, costly hearings with less access to the cost savings of consolidated process. The lengthy sequence of motions and orders in the Morgan Stanley case, for example, lasted from April 2004 to March 2005 and involved several sets of briefs and hearings.

It is also worth noting that prosecuting process crimes often requires a cumbersome and imperfect administrative handoff. The SEC, for example, has no authority to bring criminal actions. Should the SEC come upon evidence of criminal obstruction in the course of investigating or prosecuting a civil action for securities fraud, it must refer the matter to the Department of Justice.<sup>164</sup> Any economies of scale in prosecuting both underlying civil violations and process crimes will to some extent be dissipated in this bureaucratic transfer. Indeed, some amount of separation between civil and criminal prosecutions is specifically enforced in order to prevent criminal prosecutors from end-running limitations on discovery in criminal actions by tapping into expanded discovery in a parallel civil action.<sup>165</sup>

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<sup>162</sup> See, e.g., *Arthur Andersen LLP v. United States*, 544 U.S. 696, 704–08 (2005) (holding wrongful intent and contemplation of proceedings to be required for conviction under 18 U.S.C. § 1512(b) (2000)).

<sup>163</sup> See, e.g., 18 U.S.C. §§ 1621, 1623 (2000) (specifying knowledge requirements for perjury offenses).

<sup>164</sup> See, e.g., Alyssa Hall & Adam M. Schoeberlein, *Securities Fraud*, 37 AM. CRIM. L. REV. 941, 994–95 (2000) (discussing criminal referrals from SEC to DOJ).

<sup>165</sup> For example, among the criminal charges facing HealthSouth CEO Richard Scrushy were three counts of perjury arising from an SEC deposition in a parallel civil action arising from the same set of transactions and occurrences. The judge dismissed the perjury

### D. Summary Comparison with Sanctioning

The sanctioning approach and the technological approach to detection avoidance are similar along two dimensions in the social calculus, but quite different along a third. They both increase primary activity deterrence and they both incur public detection costs. But because the technological approach is not prone to the recursivity that plagues sanctioning, the technological attack is more effective at reducing private detection avoidance costs.

## VIII

### METHODS OF TECHNOLOGICAL ATTACK

How do we go about decreasing the productivity of detection avoidance?

It is clear that merely devoting additional public resources to detecting violations will not do. Simply questioning yet another witness, for example, will not necessarily decrease the productivity of detection avoidance spending. If, without coaching, a witness's answers will increase the chance of having to pay a \$100,000 sanction by ten percentage points, but with \$5000 of "preparation" this can be wholly prevented, then interrogating an additional witness will most likely increase, rather than decrease, the productivity of detection avoidance spending.

Rather, public detection spending must be specifically channeled so that each dollar, each hour, each erg of effort spent avoiding detection buys less of a reduction in the probability of detection. This is essentially a matter of making detection avoidance more difficult at each step—so that, for example, \$5000 of witness coaching only *partially* prevents the witness's positive impact on the probability of detection.

Accordingly, one natural approach is to design evidentiary process so as to exploit and amplify the difficulties generally encountered in all human endeavors. The idea is to employ these difficulties for the social good by using them against the maleficent detection avoider. Two difficulties—of cognition and of cooperation—are already exploited by current evidentiary process and may hold further potential.

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charges, however, because Justice Department officials working on the criminal side were deemed to have been too closely involved in the civil deposition. *United States v. Scrusby*, 366 F. Supp. 2d 1134, 1135, 1140 (N.D. Ala. 2005).

### A. Difficulties of Cognition

Imagine that the offender wishes to reduce the probability of detection by supplying a witness to swear falsely that the offender did not commit the underlying crime. Exploiting the witness's cognitive limitations, the law takes several steps to reduce the productivity of time and effort spent preparing this witness.<sup>166</sup>

Consider, first, that the witness must generally respond to questioning from memory.<sup>167</sup> In order to provide consistent and detailed answers, the fabricator must memorize both her main storyline and her answers to those interrogative spurs that she can anticipate. Moreover, given her cognitive inability to anticipate all possible questions, she will also have to memorize on the fly the answers she gives to questions that she did not expect. These spontaneous answers may determine the consistency of later answers to unanticipated questions, and may even necessitate changing part of her prepared story going forward, which change must itself be memorized on the spot.<sup>168</sup>

Of course, the questioner's memory is also limited. But the questioner is generally permitted to make use of whatever cognitive aids she pleases without any obligation to share these with the other side.<sup>169</sup> And, indeed, using computer software like TrialDirector and Summation, she can instantaneously check the consistency of a witness's answer with her own prior remarks or other evidence.<sup>170</sup> Such software is increasingly employed by questioners in deposing and interrogating witnesses. By allowing the questioner the full range of

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<sup>166</sup> See Sanchirico, *Upside of Cognitive Error*, *supra* note 45, at 317–25 (describing these steps in more detail).

<sup>167</sup> To the extent that the witness is permitted to refer to notes and cues, these will generally be made available to the questioner and are therefore of limited efficacy. See FED. R. EVID. 612 (governing disclosure to opponents of writings used to refresh memory).

<sup>168</sup> These factors may have played a role in the recent conviction of former Enron Chief Executive Jeffrey K. Skilling. “On the stand, Mr. Skilling offered differing and confusing explanations for [accounting irregularities at Enron]. He proved evasive and sometimes forgetful . . . .” Barrionuevo et al., *supra* note 2. Jurors reportedly did not find Skilling's forgetfulness credible. Vikas Bajaj & Kyle Whitmire, ‘I Didn't Know’ Did Not Sway Houston Jury, N.Y. TIMES, May 26, 2006, at A1.

<sup>169</sup> See, e.g., FED. R. CIV. P. 26(b)(3) (providing that documents and tangible things prepared in anticipation of litigation are discoverable only upon showing of substantial need and practical inability to obtain materials by other means, and that even when discovery of such materials is permitted, mental impressions, conclusions, opinions, and legal theories are still protected); *Hickman v. Taylor*, 329 U.S. 495, 511–13 (1947) (explicitly protecting against disclosure of mental impressions outside context of discovery of documents and tangible things; codified in part in FED. R. CIV. P. 26(b)(3)).

<sup>170</sup> See inData Corp., TrialDirector: Award-Winning Trial Presentation Software, <http://www.indatacorp.com/Products/Trial/trialDirector.aspx> (last visited May 29, 2006) (advertising TrialDirector software); Summation Legal Tech., Inc., Solutions: Enterprise, <http://www.summation.com/Solutions/Enterprise/features.aspx> (last visited May 29, 2006) (advertising Summation software).

cognitive aids, while limiting the technology available to the questioned, the law severely reduces the productivity of effort exerted by the questioned in fabricating testimony. As a result of this lopsided technological restrictiveness, each additional hour spent preparing for testimony yields much less in terms of reduced detection probability percentage points. The productivity of training for a race is low when your opponent can use a bicycle but you must run on foot. Best not to enter the race at all.

Witness preparation is also rendered less productive due to three specific aspects of how testimony, depositions, and interrogations generally proceed. First, the witness will usually not see the questions in advance.<sup>171</sup> Time spent preparing answers to the questions that one *can* anticipate is thereby less productive for the fact that such preparation may well be rendered essentially worthless with a few poorly improvised answers to questions that were unexpected. One inconsistent ad lib may be enough of a wedge to crack open an otherwise impregnable fabrication.

Second, the questioner need not commit to her questions ahead of time, but may rather adjust the subject or tenor of additional questions based on what she perceives to be uncertainties and inconsistencies in the answers provided to previous questions. This renders preparation less productive because the witness is denied the opportunity of playing the odds that particular topics will not be tested. The less the witness prepares for a line of questioning, the more it will be emphasized. Conversely, the more the witness prepares for a line of questioning, the less it will be emphasized. Preparation is thus rendered less valuable. Diligently preparing for a particular set of questions makes it more likely that such questions will be ignored once the questioner discovers that this avenue of interrogation is not fruitful.

Lastly, interrogations and depositions exploit the effects of fatigue. The difficult task of fabricating testimony becomes all the more difficult as the fabricator tires. While interrogators and deponents may substitute in and out during questioning, the witness is on her own. To be successful, therefore, the witness's preparation

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<sup>171</sup> Of course, she may be asked the same questions at trial that she was asked on deposition or during interrogation. The point is that the first time she encounters the questions her on-the-spot answers will go on record. If this first time is on deposition, and she says something at trial that is inconsistent with her on-the-spot answer on deposition, her deposition answer is often admissible at trial for the truth of the matter asserted. *See* FED. R. EVID. 801(d)(1)(A) (exempting prior inconsistent statements from hearsay prohibition). If the first time is during interrogation, her earlier answers cannot generally be admitted for substantive use, but can be used to impeach her credibility should she give inconsistent testimony at trial. *See* FED. R. EVID. 613 (providing procedural rules for impeachment use of prior inconsistent statements).

must enable her to so internalize her story that reciting it and maintaining it becomes nearly as rote as those few other cognitive tasks—like remembering one’s address and phone number—that can still be reliably accomplished by those who are mentally drained. Hours of preparation can be rendered virtually ineffective by a few unguarded answers in the last few moments of a long day of questioning.<sup>172</sup>

### B. Difficulties of Cooperation

Game theorists, especially those studying “mechanism design,” have long recognized the possibility of exploiting the difficulties and fragilities of coordination and cooperation among multiple agents.<sup>173</sup> These lessons apply to the state’s efforts to reduce the productivity of detection avoidance activity. Indeed this is one setting in which the Prisoners’ Dilemma is not just a metaphor.<sup>174</sup>

Detection avoidance, like any human activity, often requires or is facilitated by coordination among several individuals, especially if it is effected on a large scale. The state can play these individuals against each other by structuring interrogation and prosecution to amplify the temptation to break rank. “For crimes in which the core of the offense is false information, perjury, obstruction, false filings and false books and records, cooperating criminals are frequently the key

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<sup>172</sup> The procedural devices just described also hamper the sincere witness. But as argued in detail in Sanchirico, *Upside of Cognitive Error*, *supra* note 45, at 317–44, their effect is greater on the insincere witness given the higher cognitive faculties that fabrication requires. What matters is the differential effect.

<sup>173</sup> See, e.g., DREW FUDENBERG & JEAN TIROLE, *GAME THEORY* 293 (1991) (describing “shoot them all” mechanism, whereby principal learns information shared by multiple agents); Jacques Crémer & Richard P. McLean, *Full Extraction of the Surplus in Bayesian and Dominant Strategy Auctions*, 56 *ECONOMETRICA* 1247, 1247–48 (1988) (describing exploitation of correlations in bidders’ private information in design of auctions); Paul Milgrom & John Roberts, *Relying on the Information of Interested Parties*, 17 *RAND J. ECON.* 18, 25 (1986) (showing that where two informed parties with opposite interests can omit but not fabricate, Nash equilibrium reports reveal full information); John Moore & Rafael Repullo, *Subgame Perfect Implementation*, 56 *ECONOMETRICA* 1191, 1195–98 (1988) (exploring how equally informed agents can be played off against each other in sequential mechanism); Chris William Sanchirico, *Games, Information, and Evidence Production: With Application to English Legal History*, 2 *AM. L. & ECON. REV.* 342, 350–52 (2000) (modeling use of one party’s evidence to set other’s litigation payoffs).

<sup>174</sup> Professor Katyal has recently described specific ways in which the law (as principal) accomplishes this task via the doctrine surrounding conspiracy. Neal Kumar Katyal, *Conspiracy Theory*, 112 *YALE L.J.* 1307, 1346–63 (2003).

source of information."<sup>175</sup> The increased difficulty of remaining coordinated thus increases the cost of successful cover-up.<sup>176</sup>

Specific practical techniques employed by law enforcement in this area include, first, the hearsay exception for statements of a co-conspirator. Statements made by a co-conspirator (during the pendency of the conspiracy and in furtherance thereof) may be used substantively against a party even if they are not made for the purpose of testifying in the current case.<sup>177</sup> It is not enough, therefore, to carefully guard one's own statements regarding perpetration of the crime. One must also guard the statements made by one's partners, which for hearsay purposes will be treated as if they are one's own.

Other devices include prosecutorial immunity,<sup>178</sup> plea agreements,<sup>179</sup> nonprosecution agreements,<sup>180</sup> special protection for whistleblowers,<sup>181</sup> and rewards for informants.<sup>182</sup> All of these make cooperation in detection avoidance harder to maintain and thus reduce the usual productivity gains from teamwork. Thus, in covering up evidence of a law violation, two "shovels" may be putatively more productive than one. But then another person knows where the bodies are buried. And all the effort expended inearthing the evi-

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<sup>175</sup> Carberry & Gordon, *supra* note 38. For example, in the government's financial fraud case against HealthSouth CEO Richard Scrushy, more than a dozen of Scrushy's former subordinates pled guilty and testified for the government. Freudenheim, *supra* note 4. Scrushy was acquitted in this case, but still faces the prospect of a civil suit by the SEC and various private suits. Andrew Ward, *Scrushy Facing Civil Suit After Acquittal*, FIN. TIMES, July 6, 2005, at 30.

<sup>176</sup> The testimony of subordinates reportedly played an important role in the conviction of Enron chief executives Kenneth L. Lay and Jeffrey K. Skilling. Barrionuevo et al., *supra* note 2 ("The surprise testimony of David W. Delaney, the former chief of a retail unit called Energy Services, also helped pave the way for Mr. Skilling's conviction . . . For Mr. Lay, a key turning point came when Sherron S. Watkins, the former Enron vice president, took the stand . . ."); Eichenwald & Barrionuevo, *supra* note 40 (discussing testimony of government witness Ben F. Glisan Jr., former treasurer of Enron).

<sup>177</sup> FED. R. EVID. 801(d)(2)(E).

<sup>178</sup> See, e.g., 18 U.S.C. §§ 6001–6003 (2000) (allowing prosecutor to grant immunity to grand jury witness and thereby prevent witness from asserting privilege against self-incrimination).

<sup>179</sup> See, e.g., U.S. DEP'T OF JUSTICE, UNITED STATES ATTORNEYS' MANUAL § 9-27.420(A) (2d ed. Supp. 2006-2) ("In determining whether it would be appropriate to enter into a plea agreement, the attorney for the government should weigh all relevant considerations, including: 1) The defendant's willingness to cooperate in the investigation or prosecution of others . . .").

<sup>180</sup> See, e.g., *id.* § 9-27.600 (setting out guidelines for entering into nonprosecution agreements in exchange for cooperation).

<sup>181</sup> See, e.g., 18 U.S.C. § 1513 (2000 & Supp. III 2005) (providing penalties for retaliating against witness or informant).

<sup>182</sup> I.R.C. § 7623 (2000) (permitting rewards for those who inform IRS about others' tax law violations); see also I.R.S. PUBL'N NO. 733 (REV. 10-2004), REWARDS FOR INFORMATION PROVIDED BY INDIVIDUALS TO THE INTERNAL REVENUE SERVICE, available at <http://www.irs.gov/pub/irs-pdf/p733.pdf> (last visited May 29, 2006) (same).

dence is rendered ineffective if that person is also helpful to authorities in guiding them to the broken ground.

### CONCLUSION

Day in and day out, prosecutors and regulators, judges and juries, struggle against the headwind of offenders' efforts to impede the discovery and prosecution of wrongdoing. But the areas of basic legal research that ought to help us to understand and ameliorate this costly resistance remain largely silent on the topic. Scholarship on evidentiary procedure skews heavily toward the problems of disinterested and sincerely mistaken witnesses, leaving the problems of purposeful evidentiary tampering largely untended. The theory of public enforcement, on the other hand, focuses almost exclusively on governmental efforts to detect violations, offering little on violators' efforts to avoid detection.

This Article has attempted to address this scholarly oversight, with an eye toward the practical problems now confronting legal policy in this area. While the recent policy trend has been toward sanctioning detection avoidance activities, this Article suggests that a better course may be to intensify what has always been the law's chief mode of attack, namely designing evidentiary procedure to render such activities cost-ineffective.

Both sanctioning detection avoidance and reducing its technological productivity enhance deterrence of underlying violations. And both do so in return for additional public spending. But their effects on the social waste of detection avoidance activities differ markedly. Sanctions are relatively ineffective at curtailing the social cost of detection avoidance due to the special recursivity of that activity. Sanctioning cover-up activities simultaneously sends two messages to violators: Don't cover up as much; but to the extent you still do, cover *that* up more. On the other hand, constraining the productivity of detection avoidance globally discourages the activity.

Thus, instead of spending more public funds prosecuting obstruction or perjury, or deciding on the imposition of procedural sanctions, as seems to be the trend, better to use the same resources to shore up those less conspicuous aspects of evidentiary procedure that reduce the cost-effectiveness for violators of spending resources to avoid punishment. Better, in particular, to make detection avoidance a more difficult enterprise for violators by further exploiting the limits of their cognitive and cooperative abilities.