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SENTENCING THE GREEN-COLLAR OFFENDER: PUNISHMENT, CULPABILITY, AND ENVIRONMENTAL CRIME

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Federal law regulates waste management and pollution emissions through an intricate system of administrative rules and permits.¹ Violations of these legal requirements may result not only in civil money penalties, but also in criminal prosecution.² Indeed, criminal enforcement—an unusual occurrence in environmental law until well into the 1980s—has steadily increased in frequency for two decades.³ The phenomenon has not gone without notice by environmental and criminal law scholars, who have produced a near avalanche of work on environmental crime in recent years.⁴

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¹ For a brief summary of the federal environmental regulatory regime, see *infra* Part I.A.

² For a brief summary of the criminal provisions of the major environmental statutes, see *infra* Part I.B.

³ For instance, the total number of defendants prosecuted in criminal environmental cases increased by more than ten-fold between 1984 and 2001. See *infra* Part I.B and text accompanying note 70.

⁴ Recent books on the subject include RONALD G. BURNS & MICHAEL J. LYNCH, ENVIRONMENTAL CRIME: A SOURCEBOOK (2004); ENVIRONMENTAL CRIME: ENFORCEMENT, POLICY, AND SOCIAL RESPONSIBILITY (Mary Clifford ed., 1998); ENVIRONMENTAL CRIME AND CRIMINALITY: THEORETICAL AND PRACTICAL ISSUES (Sally M. Edwards et al. eds., 1996). Recent articles on environmental criminal law include J. Michael Bradford, *Environmental Crimes*, 45 S. TEX. L. REV. 5 (2003); Kathleen F. Brickey, *Charging Practices in Hazardous Waste Crime Prosecutions*, 62 OHIO ST. L.J. 1077 (2001) [hereinafter Brickey, *Charging Practices*]; Kathleen F. Brickey, *Environmental Crime at the Crossroads: The Intersection of Environmental and Criminal Law Theory*, 71 TUL. L. REV. 487 (1996); Kathleen F. Brickey, *The Rhetoric of Environmental Crime: Culpability, Discretion, and Structural Reform*, 84 IOWA L. REV. 115 (1998) [hereinafter Brickey, *Rhetoric*]; Colin Crawford,

In particular, scholars have debated the *mens rea* requirements for environmental crime, with some arguing that these requirements should be made more stringent so as to reduce the risk of convicting environmental defendants for inadvertent mistakes and purely technical violations.⁵

Despite the voluminous literature on environmental crime, one crucial aspect of the criminal process has virtually escaped scholarly attention: sentencing.⁶ This gap in the literature is surprising and unfortunate for at

Criminal Penalties for Creating a Toxic Environment: Mens Rea, Environmental Criminal Liability Standards, and the Neurotoxicity Hypothesis, 27 B.C. ENVTL. AFF. L. REV. 341 (2000); Michael Dore & Rosemary E. Ramsay, *Limiting the Designated Felon Rule: The Proper Role of the Responsible Corporate Officer Doctrine in the Criminal Enforcement of New Jersey's Environmental Laws*, 53 RUTGERS L. REV. 181 (2000); Jeremy Firestone, *Enforcement of Pollution Laws and Regulations: An Analysis of Forum Choice*, 27 HARV. ENVTL. L. REV. 105 (2003); Avi Samuel Garbow, *The Federal Environmental Crimes Program: The Lorax and Economics 101*, 20 VA. ENVTL. L.J. 47 (2001); Andrew C. Hanson, *Section 309(c) of the Clean Water Act: Using the Model Penal Code to Clarify Mental State in Water Pollution Crimes*, 20 PACE ENVTL. L. REV. 731(2003); Elizabeth M. Jalley et al., *Environmental Crimes*, 39 AM. CRIM. L. REV. 403 (2002); Paul D. Kamenar, *The Environmental Sentencing Guidelines Are Fatally Flawed and Unreasonable*, 8 MD. J. CONTEMP. LEGAL ISSUES 97 (1997); Alfred J. Kuffler, *Prosecution of Maritime Environmental Crimes Versus OPA-90s Priority for Response and Spill Prevention: A Collision Avoidance Proposal*, 75 TUL. L. REV. 1623 (2001); Richard J. Lazarus, *Meeting the Demands of Integration in the Evolution of Environmental Criminal Law: Reforming Environmental Criminal Law*, 83 GEO. L.J. 2407 (1995) [hereinafter Lazarus, *Integration*]; Richard J. Lazarus, *Mens Rea in Environmental Criminal Law: Reading Supreme Court Tea Leaves*, 7 FORDHAM ENVTL. L.J. 861 (1996) [hereinafter Lazarus, *Tea Leaves*]; Susan F. Mandiberg, *The Dilemma of Mental State in Federal Regulatory Crimes: The Environmental Example*, 25 ENVTL. L. 1165 (1995) [hereinafter Mandiberg, *Mental State*]; Susan F. Mandiberg, *Fault Lines in the Clean Water Act: Criminal Enforcement, Continuing Violations, and Mental State*, 33 ENVTL. L. 173 (2003); Susan F. Mandiberg, *Moral Issues in Environmental Crime*, 7 FORDHAM ENVTL. L.J. 881 (1996); Arnold W. Reitze, Jr., *Criminal Enforcement of Pollution Control Laws*, 9 ENVTL. LAW. 1 (2002); David B. Spence, *The Shadow of the Rational Polluter: Rethinking the Role of Rational Actor Models in Environmental Law*, 89 CAL. L. REV. 917 (2001); Thomas Richard Uiselt, *What a Criminal Needs to Know Under Section 309(c) of the Clean Water Act: How Far Does "Knowingly" Travel?*, 8 ENVTL. LAW. 303 (2002); David A. Barker, Note, *Environmental Crimes, Prosecutorial Discretion, and the Civil/Criminal Divide*, 88 VA. L. REV. 1387 (2002); David C. Fortney, Note, *Thinking Outside the "Black Box": Tailored Enforcement in Environmental Criminal Law*, 81 TEX. L. REV. 1609 (2003).

⁵ See, e.g., Hanson, *supra* note 4, at 764-67; Lazarus, *Integration*, *supra* note 4, at 2512-15; Mandiberg, *Mental State*, *supra* note 4, at 1234; Spence, *supra* note 4, at 985; Michael Vitiello, *Does Culpability Matter?: Statutory Construction Under 42 U.S.C. § 6928*, 6 TUL. ENVTL. L.J. 187, 256 (1993). For a more complete description of the scholarly debate over *mens rea* for environmental crimes, see *infra* Part III.

⁶ The most significant scholarly work on environmental sentencing has been that of Professor Mark Cohen. See, e.g., Mark A. Cohen, *Corporate Crime and Punishment: A Study of Social Harm and Sentencing Practice in the Federal Courts, 1984-1987*, 26 AM. CRIM. L. REV. 605 (1989) [hereinafter Cohen, *Corporate Crime*]; Mark A. Cohen,

least three reasons. First, in a world in which about ninety percent of criminal defendants plead guilty,⁷ trials are rare, while sentencing proceedings are routine. Thus, sentencing issues are much more likely to be litigated in environmental cases than the finer points of the substantive law, such as the *mens rea* requirements.

Second, the past decade has witnessed a remarkable growth in the volume of both the published case law and the publicly available empirical data on environmental sentencing. These developments stem from the implementation of the United States Sentencing Guidelines, which have

Environmental Crime and Punishment: Legal/Economic Theory and Empirical Evidence on Enforcement of Federal Environmental Statutes, 82 J. CRIM. L. & CRIMINOLOGY 1054 (1992) [hereinafter Cohen, *Theory*]. His contributions, however, focus on sentencing practices in the 1980s, before the United States Sentencing Guidelines went into effect. Cohen, *Theory*, *supra*, at 1071-72. Additionally, his work grows out of the tradition of economic analysis of criminal sanctions, and thus focuses on questions of over- and under-deterrence of environmental crimes. *Id.* at 1066. However, much recent scholarship calls into question the value of the economic deterrence model for understanding environmental violations. See *infra* Part VI.B.2. In any event, other than Cohen's work, the few published articles on the environmental sentencing of individual offenders are dated and generally brief. See, e.g., Jane Barrett, *Sentencing Environmental Crimes Under the United States Sentencing Guidelines—A Sentencing Lottery*, 22 ENVTL. L. 1421 (1992); Susan Hedman, *Expressive Functions of Criminal Sanctions in Environmental Law*, 59 GEO. WASH. L. REV. 889 (1991); Kamenar, *supra* note 4; Lauren A. Lundin, *Sentencing Trends in Environmental Law: An "Informed" Public Response*, 5 FORDHAM ENVTL. L.J. 43 (1993); Benjamin S. Sharp & Leonard H. Shen, *The (Mis)Application of the Sentencing Guidelines to Environmental Crimes*, C496 ALI-ABA 291 (1990). The sentencing of corporations for environmental crimes has generated a somewhat larger body of scholarship. See, e.g., Ilene H. Nagel & Winthrop M. Swenson, *The Federal Sentencing Guidelines for Corporations: Their Development, Theoretical Underpinnings, and Some Thoughts About Their Future*, 71 WASH. U. L.Q. 205, 254-58 (1993); Lucia Ann Silecchia & Michael J. Malinowski, *Square Pegs and Round Holes: Does the Sentencing of Corporate Citizens For Environmental Crimes Fit Within the Guidelines?*, 8 FED. SENTENCING REP. 230 (1996); Mark H. Allenbaugh, Comment, *What's Your Water Worth?: Why We Need Federal Fine Guidelines for Corporate Environmental Crime*, 48 AM. U. L. REV. 925 (1999); Jason M. Lemkin, Comment, *Deterring Environmental Crime Through Flexible Sentencing: A Proposal for the New Organizational Environmental Sentencing Guidelines*, 84 CAL. L. REV. 307 (1996). Corporations, of course, cannot be incarcerated and cannot act culpably in the same manner as individuals; they have "no soul to be damned and no body to be kicked." John C. Coffee, Jr., *"No Soul to Damn, No Body to Kick": An Unscandalized Inquiry Into the Problem of Corporate Punishment*, 79 MICH. L. REV. 386, 386 (1981) (quoting MERVYN KING, PUBLIC POLICY AND THE CORPORATION 1 (1977)). Corporate sentencing thus presents quite distinct theoretical and practical issues and will not be considered at length in the present Article.

⁷ Stephanos Bibas, *Judicial Fact-Finding and Sentence Enhancements in a World of Guilty Pleas*, 110 YALE L.J. 1097, 1150 (2001); see also Ronald F. Wright, *The End of Innocence in Federal Criminal Justice* 14 (2004) (unpublished manuscript on file with the author) (noting that, in the federal system, the percentage of terminated cases ending in a guilty plea was 86.5% in 2002).

governed the sentencing process in federal courts since 1987.⁸ Among other things, the Guidelines set forth specific instructions for sentencing environmental crimes—instructions that will be referred to here as the “environmental guidelines”—including the particular weight to be given each of eleven different variables in determining sentence length.⁹ However, the environmental guidelines have raised a host of interpretive problems, generating an ever-increasing body of judicial opinions.¹⁰ Providing additional grist for researchers, the United States Sentencing Commission monitors implementation of the Guidelines by compiling information on each criminal case that proceeds to judgment in the federal system.¹¹ Yet, scholars of environmental criminal law have neglected both the sentencing cases and the Commission data. Thus, they have failed to note a fascinating and important story: the actual practice of environmental sentencing (embodied in the data) has been diverging increasingly from the formal law of environmental sentencing (embodied in the environmental guidelines and the appellate case law). In particular, at the same time that the appellate courts have interpreted the environmental guidelines so as to provide for increasingly *severe* sentences, the district courts have actually been imposing increasingly *lenient* sentences.¹²

Third, the great *mens rea* debate, which *has* consumed considerable scholarly attention, turns largely on the real-world effects of environmental criminal law’s broad liability net. Specifically, defenders of the current regime rely on prosecutorial discretion to protect the “morally innocent” from criminal sanctions for low-level environmental violations.¹³ Critics, however, find prosecutors less trustworthy.¹⁴ Both sides have missed the potential for another actor in the criminal justice system, the sentencing judge, to protect low-culpability defendants from harsh sanctions. And, indeed, adding sentencing to the mix alters the terms of the debate considerably: because few environmental defendants of *any* type go to prison,¹⁵ we can be reasonably confident that few low-culpability

⁸ For a more detailed description of the Federal Sentencing Guidelines, see *infra* Part IV.A.

⁹ For a complete summary of the environmental guidelines, see *infra* Part IV.B.

¹⁰ For a list of published appellate cases on environmental sentencing, see *infra* Appendix B.

¹¹ 28 U.S.C. § 994(w) (2003).

¹² See *infra* Part IV.D.

¹³ See, e.g., Brickey, *Charging Practices*, *supra* note 4, at 1084.

¹⁴ See, e.g., Spence, *supra* note 4, at 988-89 (“[P]rosecutors may be overzealous or face strong incentives to prosecute unpopular defendants.”).

¹⁵ See *infra* Part IV.D.

defendants are incarcerated—regardless of whether we are persuaded that prosecutorial discretion is exercised responsibly.

Developing this and other related points, the present Article offers the first comprehensive study of federal environmental sentencing. The Article has both descriptive and prescriptive objectives. On the descriptive side, the Article demonstrates, in more systematic fashion than has previously been attempted, how the environmental criminal enforcement system may sweep in low-culpability violators, that is, violators whose conduct is relatively blameless in light of such considerations as harm, dangerousness, and intent. Of course, as already noted, the sentencing data indicate such violators are unlikely to receive lengthy prison terms on a consistent basis. However, the Article will also demonstrate that the sentencing safeguard operates *in spite of*, not because of, the formal content of environmental sentencing law.

The latter observation leads to the Article's prescriptive side. On their face, the environmental guidelines do a poor job of protecting low-culpability violators from incarceration. Indeed, for that matter, the environmental guidelines also do a poor job of ensuring more severe sentences for some categories of high-culpability violators. While the sentencing data suggest that the first problem has been ameliorated to a considerable extent by actual sentencing practices, the environmental guidelines should nonetheless be amended. On the one hand, the convicted *low-culpability* violator is entirely at the mercy of a judge who may or may not exercise her discretion to "depart" from a prescribed sentencing range in order to ensure a just sentence, with virtually no chance of having an unfavorable decision reversed on appeal. On the other hand, the undeserving *high-culpability* defendant may receive precisely the same lenient treatment that is apparently accorded most low-culpability defendants.

The Article thus proposes a broad reform agenda for the environmental guidelines. Briefly, the Article argues that the guidelines should make sentence length proportionate to culpability (as against, for instance, a deterrence-based approach); that the guidelines should mandate a broad inquiry into such basic culpability factors as harm, dangerousness, and intent (as against the more piecemeal approach to culpability employed by the current environmental guidelines); and that, in certain limited circumstances, the defendant's justifiable misunderstanding of the law should result in sentence mitigation. Environmental guidelines restructured along these lines would connect punishment more clearly to our moral intuitions regarding blameworthiness; inspire greater confidence, and hence greater adherence, among judges and prosecutors; reassure those who are

subject to environmental regulations that they will not receive lengthy prison terms for technical or inadvertent violations of the law; and reassure the public that the most culpable environmental offenders will receive appropriately severe punishment.

The analysis has broader implications for the Federal Sentencing Guidelines. For instance, the assessment of culpability by reference to a host of narrow, objective questions—an approach that is found throughout the Federal Guidelines—is shown here to be fundamentally incoherent and unworkable.¹⁶ Not only is this piecemeal approach likely to over- and under-count particular culpability factors, but the resulting complexity also undermines the reliability of the sentencing process and the commitment of front-line sentencing actors to implement the Guidelines faithfully. As a result, the piecemeal approach cannot deliver the fairness and consistency that it promises, and should be replaced with an approach that entrusts judges with the responsibility to assess culpability in a more holistic fashion.

Lending greater urgency to this project, the Supreme Court's June 2004 decision in *Blakely v. Washington*¹⁷ may work dramatic changes in federal sentencing law.¹⁸ Specifically, the Court indicated that juries, not judges, must perform the fact-finding necessary to increase the punishment to which a defendant is exposed.¹⁹ While the implications of *Blakely* for the federal sentencing system remain the subject of debate,²⁰ *Blakely* and its progeny are likely to open the fundamental premises of the Guidelines to reconsideration in Congress and the Commission. To the extent that *Blakely* renders aspects of the Guidelines system unconstitutional, Congress and the Commission *could* effectively rebuild the existing system around *Blakely*,²¹ but that leaves open the question of whether they *ought* to do so. In light of the flaws of the piecemeal approach, this Article argues that they should not.²²

The Article proceeds as follows. Part I provides a brief overview of the federal environmental regulatory regime, by which is meant the set of federal laws that regulate pollution control and waste management. (Laws designed principally to protect wildlife and preserve natural resources, while sometimes thought of as environmental laws, lie beyond the scope of

¹⁶ See *infra* Part VII.

¹⁷ 124 S. Ct. 2531 (2004).

¹⁸ See *infra* Part IV.C.

¹⁹ *Blakely*, 124 S. Ct. at 2543.

²⁰ See *infra* Part IV.C.

²¹ See *infra* Part IV.C.

²² See *infra* Part VII.B.

this Article.) Part II demonstrates that environmental law criminalizes an extraordinarily wide range of conduct, including much conduct that lacks substantial culpability. Part III reconsiders the much-discussed debate between Professors Lazarus and Brickey on *mens rea* and environmental crime. The most recent entry in the debate is critiqued, based in part on the sentencing data.

Recognizing that environmental law criminalizes a wide range of conduct, we can better appreciate the need for sentencing law to distinguish effectively between minimally and maximally culpable conduct, ensuring more severe sentences for the latter than for the former. Thus, Part IV provides a thorough description of the environmental guidelines, including an analysis of pending amendments scheduled to take effect in November 2004.²³ Part IV also describes the Commission's data on environmental sentencing, emphasizing the unexpected and growing lenience of the sentences. It turns out that prison time is the exception, not the norm, for environmental defendants. One cause for this trend is the extraordinarily high rate of downward departures in environmental cases, which permit the sentencing judge to deviate from strict application of the guidelines.

Part V provides a critique of environmental sentencing law. Under the guidelines, important culpability considerations (such as intent) are disregarded, while others (such as harm) are measured inconsistently and arbitrarily. The appellate case law is also considered. While the appellate courts have had opportunities to mitigate the incoherence of the guidelines, they have actually exacerbated the problems by ignoring culpability considerations when interpreting ambiguous provisions. The law thus creates substantial risks of disproportionality: low-culpability defendants may receive longer prison terms than high-culpability defendants. The district courts may have been ameliorating this problem with their liberal departure practices in recent years, but there are good reasons to doubt the appropriateness and long-term adequacy of this response, such as the enactment of legislation in 2003 that is intended to discourage departures.

²³ The analysis here focuses on the length of prison terms for individual defendants; while corporations may also be convicted of environmental crimes, corporate sentencing lies largely beyond the scope of this Article. For a description of the available criminal sanctions for corporations, see Mark A. Cohen, *Sentencing the Environmental Criminal*, in ENVIRONMENTAL CRIME: ENFORCEMENT, POLICY, AND SOCIAL RESPONSIBILITY 229, 237-40 (Mary Clifford ed., 1998). Also beyond the scope of this Article are environmental crimes committed by government agencies, which have, in fact, been responsible for some of the worst contamination problems in many parts of the country. For a description of environmental crimes perpetrated by government agencies and contractors, and a discussion of the unique challenges in prosecuting such offenses, see Mark Seis, *Five Types of Environmental Criminals*, in ENVIRONMENTAL CRIME: ENFORCEMENT, POLICY, AND SOCIAL RESPONSIBILITY 255, 255-68 (Mary Clifford ed., 1998).

In short, it is time for the Commission to rethink the basic structure of the environmental guidelines.

Part VI offers the reform agenda, emphasizing the preferability of a broad inquiry into culpability over the current piecemeal approach. Part VII, a conclusion, discusses broader lessons for the Federal Sentencing Guidelines. Appendix A provides specific language for a new environmental sentencing guideline that embodies these objectives. Appendix B summarizes the appellate cases on environmental sentencing that are discussed in Part V.

I. ENVIRONMENTAL CRIMINAL LAW

A. FEDERAL ENVIRONMENTAL LAW

In the 1970s, Congress created the statutory framework for modern pollution regulation.²⁴ This framework includes such statutes as the Resource Conservation and Recovery Act ("RCRA")²⁵; Clean Water Act ("CWA")²⁶; Clean Air Act ("CAA")²⁷; Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA")²⁸; Federal Insecticide, Fungicide, and Rodenticide Act ("FIFRA")²⁹; Toxic Substances Control Act ("TSCA")³⁰; and Safe Drinking Water Act ("SDWA").³¹ For present purposes, the first three merit particular attention, both because they establish extraordinarily broad, ambitious regulatory regimes and (relatedly) because they generate a disproportionate share of the enforcement cases against violators.³²

²⁴ Federal environmental legislation dates back at least to 1899, when Congress enacted the Rivers and Harbors Act. Gerhard O.W. Mueller, *An Essay on Environmental Criminality*, in ENVIRONMENTAL CRIME AND CRIMINALITY: THEORETICAL AND PRACTICAL ISSUES 3, 5 (Sally M. Edwards et al. eds., 1996); see 33 U.S.C. § 407 (codifying prohibition in Rivers and Harbors Act on depositing refuse in navigable waters). However, Congress did not create broad civil and criminal liability regimes for pollution violations until the 1970s. Mueller, *supra*, at 5.

²⁵ RCRA is codified as part of the Solid Waste Disposal Act, 42 U.S.C. §§ 6901-6992k (1996).

²⁶ 33 U.S.C. §§ 1251-1387 (1987).

²⁷ 42 U.S.C. §§ 7401-7671q (1990).

²⁸ 42 U.S.C. §§ 9601-9675 (2002).

²⁹ 7 U.S.C. §§ 136-136y (1996).

³⁰ 15 U.S.C. §§ 2601-2692 (1992).

³¹ 42 U.S.C. §§ 300f-300j (1996).

³² For instance, in fiscal year 2000, the CWA, RCRA, and the CAA ranked first, second, and fourth, respectively, among all of the environmental statutes in the dollar value of criminal penalties assessed. BURNS & LYNCH, *supra* note 4, at 153. The CAA ranked first in civil penalties, followed by the CWA and RCRA. *Id.*

RCRA chiefly regulates the handling of hazardous wastes.³³ The statute requires a permit for the treatment, storage, or disposal of such wastes,³⁴ and mandates detailed record-keeping in connection with their generation and transportation.³⁵ RCRA further authorized the United States Environmental Protection Agency (“EPA”) to promulgate such additional regulations for the handling of hazardous wastes as may be necessary to protect human health and the environment.³⁶ These regulations have grown to occupy more than 1,000 pages of the Code of Federal Regulations,³⁷ covering such minutiae of facility operation as the precise wording of warning signs at entrances,³⁸ the content of employee job descriptions,³⁹ and the types of emergency response equipment that must be maintained on-site.⁴⁰

The CWA regulates water pollution.⁴¹ Like RCRA, the CWA establishes a complex permitting system for regulated activities: in general, the statute prohibits the discharge of pollutants into navigable waters without a permit.⁴² Permitted facilities must comply with effluent limitations established by EPA,⁴³ which are based on the pollution control capabilities of the best available technology.⁴⁴ Thus, the CWA does not prohibit water pollution *per se*, but, rather, constrains water pollution by allocating the right to pollute through government-issued permits. The CWA also requires dischargers to monitor, and maintain records of, the content and volume of their effluent.⁴⁵

Within the broad sweep of its permitting program, the CWA regulates discharges of pollutants that would not normally be thought of as toxic or

³³ For a concise summary of RCRA, see Theodore L. Garrett, *An Overview of RCRA*, in THE RCRA PRACTICE MANUAL 1, 1-13 (Theodore L. Garrett ed., 2d ed. 2004).

³⁴ 42 U.S.C. § 6925(a) (1996).

³⁵ 42 U.S.C. § 6923 (1984); 42 U.S.C. § 6922 (1980).

³⁶ 42 U.S.C. § 6924(a) (2003). EPA, an agency within the executive branch, also has primary responsibility at the federal level for enforcing RCRA and other environmental statutes, which it does mostly through the efforts of its ten regional offices. Bill Hyatt, *The Federal Environmental Regulatory Structure*, in ENVIRONMENTAL CRIME: ENFORCEMENT, POLICY, AND SOCIAL RESPONSIBILITY 115, 123 (Mary Clifford ed., 1998).

³⁷ Garrett, *supra* note 33, at 1-2.

³⁸ 40 C.F.R. § 264.14(c) (2003).

³⁹ *Id.* § 264.16(d)(2).

⁴⁰ *Id.* § 264.32.

⁴¹ For a concise summary of major features of the CWA, see Jalley et al., *supra* note 4, at 421-30.

⁴² 33 U.S.C. § 1311(a) (1995).

⁴³ 33 U.S.C. § 1311(e) (2000).

⁴⁴ *Id.* § 1311(b)(2)(A).

⁴⁵ 33 U.S.C. § 1318(a)(A) (1987).

otherwise harmful. The statutory definition of "pollutant," for instance, includes "sand," "rock," "wrecked equipment," and "dredged spoil."⁴⁶ Thus, the CWA's ban on unpermitted discharges covers attempts to eliminate wetlands by filling them in with otherwise innocuous materials without a permit.⁴⁷ This aspect of the statute has provoked much controversy, as well as some defiance by developers and property-owners, many of whom view wetlands as a nuisance to be overcome, rather than as an ecological asset to be preserved.⁴⁸

The CAA regulates air pollution in a manner that is analogous to the CWA's regulation of water pollution.⁴⁹ Of particular importance for present purposes, the CAA authorizes EPA to regulate the handling of asbestos,⁵⁰ which EPA has done by promulgating a lengthy set of technical rules.⁵¹ These regulations include specific directions as to the precautions that must be undertaken when renovating or demolishing older buildings that contain asbestos insulation, such as wetting surfaces and ventilating work areas.⁵² The violation of such requirements has become a common source of criminal litigation.⁵³

B. CRIMINAL ENFORCEMENT OF ENVIRONMENTAL LAWS

As it enacted the major environmental statutes in the 1970s, Congress included criminal enforcement provisions, but these provisions provided only misdemeanor-level sanctions for violators (i.e., maximum incarceration terms of not more than one year) and were rarely utilized.⁵⁴ In 1980, however, Congress began to create environmental felonies through an

⁴⁶ 33 U.S.C. § 1362(6) (2000).

⁴⁷ *Id.* § 1344(a). See generally *United States v. Riverside Bayview Homes, Inc.*, 474 U.S. 121 (1985) (holding that "navigable water," as used in the CWA, includes some wetlands).

⁴⁸ See, e.g., *Lazarus, Integration*, *supra* note 4, at 2409 (describing case of land owner who filled in wetland on his property in defiance of government orders).

⁴⁹ For a concise summary of major features of the CAA, see *Jalley et al.*, *supra* note 4, at 448-57.

⁵⁰ 42 U.S.C. §§ 7412(b), (h)(1) (2000).

⁵¹ 40 C.F.R. §§ 61.140-61.157 (2000).

⁵² *Id.* § 61.145.

⁵³ *Reitze*, *supra* note 4, at 37. "Most asbestos cases involve 'rip and skip' jobs, whereby employers hire workers by the day to remove asbestos from buildings without advising them of the nature of the material with which they are working and without providing them with any protective gear." *Id.*

⁵⁴ *Firestone*, *supra* note 4, at 110. EPA found that early prosecutions strained its enforcement budget and reduced its ability to accomplish enforcement through civil or administrative processes. *Reitze*, *supra* note 4, at 6.

amendment to RCRA,⁵⁵ and, shortly thereafter, EPA established its Office of Criminal Enforcement.⁵⁶

Criminal enforcement gained momentum steadily during the 1980s.⁵⁷ In 1987, Attorney General Meese authorized a new Environmental Crimes Section within the United States Department of Justice (“DOJ”) in order, as he put it, to “convey a message of serious intent to the regulated community.”⁵⁸ At about the same time, Congress “upgraded” several additional environmental crimes that had been misdemeanors to felonies.⁵⁹ Following these and subsequent amendments, all of the major environmental statutes now make criminal penalties, typically including felony sanctions, available for violations of duties imposed pursuant to the environmental statutes (including violations not only of express statutory requirements, but also of administratively promulgated regulations and permit conditions).⁶⁰

More specifically, RCRA, the CWA, and the CAA establish a three-tiered system of criminal sanctions.⁶¹ First, the statutes impose misdemeanor penalties for negligent violations.⁶² Second, the statutes impose felony sanctions for knowing violations, with maximum terms of three to five years, depending on the statute.⁶³ Knowing violations are the most important and frequently charged category of criminal violations.⁶⁴ Third, the statutes provide a special enhanced level of penalties (with maximum terms of up to fifteen years) for violations that place an individual in imminent danger of death or serious bodily injury.⁶⁵

⁵⁵ Firestone, *supra* note 4, at 110.

⁵⁶ Sally M. Edwards, *Introduction to ENVIRONMENTAL CRIME AND CRIMINALITY: THEORETICAL AND PRACTICAL ISSUES* xi, xi (Sally M. Edwards et al. eds., 1996).

⁵⁷ Hedman, *supra* note 6, at 894.

⁵⁸ *Id.*

⁵⁹ *Id.* at 895.

⁶⁰ For a concise tabular summary of the criminal provisions in the major environmental statutes, see Reitze, *supra* note 4, at 22-24. Environmental offenses may also be subject to criminal prosecution under various general federal criminal statutes, such as the false statement, conspiracy, and mail fraud laws. For a description of these and other pertinent general criminal statutes, see *id.* at 24-26.

⁶¹ Firestone, *supra* note 4, at 111.

⁶² *Id.*; see, e.g., Clean Water Act, 33 U.S.C. § 1319(c)(1) (2000).

⁶³ Firestone, *supra* note 4, at 111; see, e.g., 33 U.S.C. § 1319(c)(2). Maximum penalties are enhanced for recidivists. See, e.g., *id.* (establishing a six-year maximum for second or subsequent conviction).

⁶⁴ Barker, *supra* note 4, at 1403.

⁶⁵ Firestone, *supra* note 4, at 111; see, e.g., 33 U.S.C. § 1319(c)(3).

As Congress both developed this statutory scheme and allocated more resources for criminal enforcement in the 1980s and 1990s,⁶⁶ the number of environmental criminal cases grew dramatically.⁶⁷ In fiscal year 2002, the most recent year for which data is available, EPA referred 250 matters to DOJ for criminal prosecution,⁶⁸ up from thirty-one in 1984.⁶⁹ The total number of defendants charged rose from thirty-six in 1984 to 371 in 2001.⁷⁰ Criminal sentences in 2002 totaled more than 215 years, and fines more than \$62 million—numbers that were actually down a bit from Clinton-era highs.⁷¹ As one commentator puts it, “felony prosecutions of environmental crimes stand out as the major change in environmental enforcement over the past 20 years.”⁷²

Criminal enforcement, of course, is not the only type of enforcement: it is best understood as one tool in an enforcement toolbox that also includes various civil and administrative enforcement options. Faced with a violation, EPA chooses a response. If EPA decides to seek sanctions, EPA must select the venue for enforcement: administrative, civil, or criminal.⁷³ Each venue has its own unique procedures and sanctioning scheme.⁷⁴

⁶⁶ EPA, for instance, increased its number of criminal investigators from six to two hundred between 1982 and 1997. Reitze, *supra* note 4, at 8-9.

⁶⁷ Firestone, *supra* note 4, at 110.

⁶⁸ BURNS & LYNCH, *supra* note 4, at 109. In the early days of criminal enforcement, EPA relied on DOJ's centralized Environmental Crimes Section to handle prosecutions. Reitze, *supra* note 4, at 8. More recently, the local U.S. Attorneys' offices have taken on a more active role, sometimes prosecuting environmental cases with virtually no input from “Main Justice” in Washington. *Id.*

⁶⁹ *Id.* at 11.

⁷⁰ *Id.*

⁷¹ BURNS & LYNCH, *supra* note 4, at 109. This may reflect EPA's post-9/11 redirection of its criminal investigation resources to terrorism issues. Reitze, *supra* note 4, at 9.

⁷² Hyatt, *supra* note 36, at 139. At the state level, environmental prosecutions have also become considerably more common since 1980, although there remains wide divergence in enforcement practices from state to state. Sally M. Edwards, *Environmental Criminal Enforcement: Efforts by the States*, in ENVIRONMENTAL CRIME AND CRIMINALITY: THEORETICAL AND PRACTICAL ISSUES 205, 227 (Sally M. Edwards et al. eds., 1996). For recent data on total penalties collected by the states, see BURNS & LYNCH, *supra* note 4, at 154. State and federal enforcement agencies have varied and complicated relationships, with EPA generally occupying something of an oversight role in order to ensure that state enforcement is adequate. See generally CLIFFORD RECHTSCHAFFEN & DAVID L. MARKEL, REINVENTING ENVIRONMENTAL ENFORCEMENT AND THE STATE/FEDERAL RELATIONSHIP 91-137 (2003). In recent years, tensions between federal and state enforcers have grown as states have increasingly turned away from EPA's deterrence-based framework. *Id.* at 139. For a description of the specific points of disagreement, as well as EPA's attempts to accommodate state initiatives, see *id.* at 139-212.

⁷³ Firestone, *supra* note 4, at 105.

⁷⁴ *Id.* at 108-10.

Criminal enforcement entails a range of particularly high procedural protections for the defendant (e.g., the beyond a reasonable doubt standard of proof and the privilege against self-incrimination),⁷⁵ but also makes available a richer and more compelling array of sanctions. Most notably, criminal conviction carries with it the possibility of incarceration for individual defendants.⁷⁶ Corporations—which are also subject to prosecution for environmental crimes⁷⁷—cannot be incarcerated, but are subject to supervised probation as a penalty, which may be disabling to the corporation in ways that are analogous to the incarceration of an individual.⁷⁸

The increasing availability of felony prosecution has thus given environmental enforcers extraordinary new powers. Yet, with enhanced power comes the risk of over-reaching and abuse. Given the possibility of considerable monetary penalties through civil and administrative enforcement (up to \$25,000 per day of violation),⁷⁹ one might question why Congress has also added the ultimate weapon of criminal prosecution to the enforcement arsenal. The conventional answer focuses on the particular need for non-monetary sanctions when fines can be simply passed on to customers or shareholders as just another cost of doing business.⁸⁰ Criminal conviction carries a moral stigma that may not be so easily escaped.⁸¹ Additionally, prison terms are said to be an especially valuable sanction in attempting to control the behavior of corporate officials, “who belong to a social group that is exquisitely sensitive to status deprivation and censure.”⁸² In short, supporters of environmental criminal law tend to

⁷⁵ *Id.* at 108.

⁷⁶ *Id.* at 111.

⁷⁷ Corporations may be especially attractive targets for prosecution because of their deep pockets and because they have no privilege against self-incrimination under the Fifth Amendment. Michael W. Steinberg & Kenneth D. Woodrow, *Civil and Criminal Enforcement*, in THE RCRA PRACTICE MANUAL 417, 433 (Theodore L. Garrett ed., 2d ed. 2004). While felony convictions require “knowing” acts, the corporation may have ascribed to it the collective knowledge of its employees, or be held vicariously liable under the doctrine of *respondeat superior*. *Id.*

⁷⁸ Firestone, *supra* note 4, at 112. Additionally, convictions may give rise to a range of collateral consequences for defendants (individuals or corporations) that may also distinguish criminal enforcement in important ways from other types of enforcement. *Id.* Criminal convictions, for instance, may impose a moral stigma on the defendant and his or her associates. *Id.* at 112-13. Evidence of a conviction can be used against the defendant in subsequent civil matters. *Id.* at 113. And a conviction may disqualify a firm from government contracts. *Id.* at 114.

⁷⁹ *Id.* at 109.

⁸⁰ *Id.* at 111.

⁸¹ *Id.* at 112-13.

⁸² Hedman, *supra* note 6, at 895.

emphasize the supposedly unique deterrent value of criminal sanctions in ensuring compliance with environmental law.⁸³

II. THE PROBLEM OF THE MINIMALLY CULPABLE OFFENDER

Perhaps the most controversial aspect of criminal environmental enforcement is its capacity to impose criminal liability on defendants who are not especially blameworthy. This Part identifies the specific features of environmental law that result in the criminalization of conduct that is "minimally culpable." Before proceeding, however, four preliminary qualifications are in order.

⁸³ *Id.*; see also Neal Shover, *White-Collar Crime*, in THE HANDBOOK OF CRIME AND PUNISHMENT 133, 145 (Michael Tonry ed., 1998) (noting a common assumption that white-collar criminals are more subject to deterrence than street criminals). Some doubt will be cast on this deterrence-based approach *infra* Part VI.B.2.

This is, in any event, a *policy* explanation for environmental criminal law. A *political* explanation—why Congress has been as responsive as it has been to calls for criminal enforcement—is less manifest. However, Professor Khanna has recently suggested a general political economy explanation for corporate crime legislation:

Most corporate crime legislation arises at times when there is a large public outcry over a series of corporate scandals or around a downturn in the economy. Congress must respond. Corporate crime legislation may be the preferred response for some corporate interests because it satisfies the public outcry while imposing relatively low costs on those interests, thereby avoiding legislative and judicial responses that are more harmful to their interests and sometimes deflecting criminal liability away from managers and executives and onto corporations.

Vikramaditya S. Khanna, *Corporate Crime Legislation: A Political Economy Analysis*, 82 WASH. U. L.Q. 95, 98 (2004). Professor Khanna continues:

One of the first things to note about corporate crime legislation is that enforcement has traditionally been quite thin—indeed it may appear largely symbolic. This suggests that corporate crime legislation may not generally be perceived as a big threat to management and big business. In contrast, corporate civil liability, which is enforced by both government agencies and private litigants, has greater enforcement.

Id. at 106. The notion that criminal liability laws substitute for civil liability laws that are more feared by corporate interests is at least plausible in the environmental context, where numerous procedural limitations effectively hamstring private citizen enforcement. For a description of these difficulties, see David R. Hodas, *Enforcement of Environmental Law in a Triangular Federal System: Can Three Not Be a Crowd When Enforcement Authority Is Shared by the United States, The States, and Their Citizens?*, 54 MD. L. REV. 1552, 1617-51 (1995). The steady growth in the criminal enforcement of environmental laws may suggest, however, that the corporate substitution "strategy"—if that indeed was the objective of corporate interests—backfired. On the other hand, criminal enforcement focuses mostly on small businesses, not the large corporations that presumably wield the most influence in Congress. See *infra* Part VI.F. Thus, if we see the guiding hand of *big* business—not just corporations generally—behind the environmental criminal legislation, then the substitution strategy may appear more successful and, hence, more plausible as an explanation for the legislation.

First, the term “culpability” is used here to indicate moral blameworthiness in light of community values.⁸⁴ The content of these values will be explored in greater detail below,⁸⁵ but, for now, the reader may wish to note that I employ a broader definition of culpability than do those commentators who equate culpability with *mens rea*, or state of mind, alone.⁸⁶ Here, *mens rea* is only one of four different dimensions of culpability.

Second, the term “minimally culpable conduct” indicates conduct that has little or no intrinsic blameworthiness: any culpability inheres principally in the relationship between the conduct and the broader environmental regulatory regime; in the absence of that positive law, the conduct would almost certainly not be considered appropriate for moral condemnation.⁸⁷ To be perfectly clear, “minimally culpable conduct” is *not* intended to mean “utterly blameless conduct.” The claim is not that environmental law criminalizes conduct wholly lacking in blameworthiness—a controversial proposition that need not be proven or disproven for present purposes. (One might plausibly argue, for instance, that conduct that has been criminalized is *per se* blameworthy.)⁸⁸ The claim here is more modest: that environmental law criminalizes a wide range of conduct, some of which is substantially less blameworthy than we might

⁸⁴ See HYMAN GROSS, A THEORY OF CRIMINAL JUSTICE 76 (1979) (defining culpability as blameworthiness).

⁸⁵ See *infra* Part II.B.2.

⁸⁶ See, e.g., Arnold H. Loewy, *Culpability, Dangerousness, and Harm: Balancing the Factors on Which Our Criminal Law Is Predicated*, 66 N.C. L. REV. 283, 283 (1988). As explained below, my broader definition of culpability encompasses Professor Loewy’s concepts of “dangerousness” and “harm,” which he distinguishes from the narrower sense of “culpability.” See *infra* Part II.B.2. The differences are more semantic than substantive.

⁸⁷ I mean here to suggest something along the lines of the common law concept of *malum prohibitum*. See Stuart P. Green, *Why It’s A Crime to Tear the Tag Off a Mattress: Overcriminalization and the Moral Content of Regulatory Offenses*, 46 EMORY L.J. 1533, 1538 (1997) (contrasting *malum prohibitum* with *malum in se* concepts in connection with regulatory offenses).

⁸⁸ See *id.* at 1538-39 (discussing ways that disobedience to the law can be viewed as morally wrongful and meriting criminalization); see also Sanford H. Kadish, *Some Observations on the Use of Criminal Sanctions in Enforcing Economic Regulations*, 30 U. CHI. L. REV. 423, 445 (1963) (“[T]he choice to act in defiance of the criminal prohibition may be regarded as in some measure furnishing an independently adequate ground for condemnation.”). For contrary views, see Douglas N. Husak, *Limitations on Criminalization and the General Part of Criminal Law*, in CRIMINAL LAW THEORY: DOCTRINES OF THE GENERAL PART 13, 29-30 (Stephen Shute & A.P. Simester eds., 2002); Kenneth W. Simons, *When Is Strict Criminal Liability Just?*, 87 J. CRIM. L. & CRIMINOLOGY 1075, 1089-90 (1997) (“That citizens are on notice of the existence of such criminal statutes hardly shows that the content of any such statute will be consistent with principles of retributive blame.”).

expect, particularly considering that it is punishable as a felony.⁸⁹ Put differently, the *substantive* law of environmental crimes is largely insensitive to gradations of culpability; thus, if we care about proportionality in criminal punishment (and I will argue below that we should⁹⁰), then *sentencing* law will have to do the work of ensuring that minimally culpable conduct is punished less severely than more serious types of environmental offenses.

Third, this Part deals chiefly with the *theoretical* scope of environmental criminal liability. While a few specific cases are discussed for purposes of illustration, this Part should not be read as an argument that *all* people convicted of environmental crimes in the real world fall into the minimally culpable category. Much environmental crime is plainly reprehensible, and, indeed, might be subject to prosecution under more traditional provisions of the criminal code, such as those concerning trespass, assault, and fraud.⁹¹ As discussed in the next Part, there are good reasons to believe that prosecutors focus their resources largely (though not exclusively) on relatively more culpable conduct. At the same time, the next Part will also show that the risk of prosecution and conviction for minimally culpable conduct is more than just a theoretical concern, which, again, focuses our attention on the sentencing process as a necessary safeguard against unduly severe punishment.

Fourth, this Part should not be read as an argument that substantive environmental criminal law should be changed, for instance, by imposing higher culpability requirements. To observe that the law criminalizes certain minimally culpable conduct does not lead inevitably to the conclusion that the law must be changed. The debate over whether the substantive law *should* be changed is also considered in the next Part.

With those caveats, this Part proceeds by highlighting a few salient features of environmental law that contribute to its tendency to criminalize minimally culpable conduct. Next, this Part describes the four-dimensional

⁸⁹ Our intuitive discomfort with imprisoning offenders for minimally culpable misconduct may be reflected in recent Supreme Court cases that employ doctrines of statutory interpretation to exclude low-culpability defendants from liability if they would otherwise face mandatory incarceration. See Joseph E. Kennedy, *Making the Crime Fit the Punishment*, 51 EMORY L.J. 753, 754 (2002) ("The Court has been interpreting mens rea to protect the morally innocent if the sentencing guidelines would likely require imprisonment upon conviction.").

⁹⁰ See *infra* Parts II.B.1, VI.B.1.

⁹¹ For examples of relatively high-culpability environmental crimes, see the discussion of "sludge-runners" in Joel Epstein, *State and Local Environmental Enforcement*, in ENVIRONMENTAL CRIME: ENFORCEMENT, POLICY, AND SOCIAL RESPONSIBILITY 145, 156 (Mary Clifford ed., 1998).

model of criminal culpability. Finally, this Part employs the model so as to demonstrate in precisely what ways environmental law criminalizes minimally culpable conduct.

A. SALIENT FEATURES OF ENVIRONMENTAL LAW

Other commentators have observed the potential of environmental laws to criminalize minimally culpable conduct (though not in as systematic a fashion as is attempted here).⁹² For instance, Professor Lazarus has identified several distinguishing features of environmental law that pose unique challenges in developing a coherent environmental criminal enforcement program.⁹³ Several of these features bear directly on culpability.

First, environmental law aims chiefly at *risk reduction*.⁹⁴ The regulatory regime seeks to reduce the likelihood of harm occurring in the future (say, cases of cancer), rather than seeking to punish harms after they occur. Environmental contamination often gives rise to injuries that do not become manifest until long after the contaminants are released into the environment. When injuries do become manifest, scientific uncertainties may render the accurate assignment of blame nearly impossible,⁹⁵ which arguably necessitates the *ex ante* risk reduction approach. At the same time, this tendency presents a difficulty for criminal enforcement: while the criminal law usually concerns itself with conduct that actually causes (or at least imminently threatens) tangible harm, the environmental laws regulate conduct that poses uncertain risks of harm, sometimes in the distant future.⁹⁶

Second, environmental pollution—the subject of the environmental regulatory regime—remains *inevitable and pervasive*.⁹⁷ Lazarus observes:

Pollution occurs constantly—whenever there is human contact with the natural environment. . . . The laws of humankind cannot prevent it.

⁹² In particular, this Article's discussion of culpability and environmental crime differs from earlier studies by employing a comprehensive model of culpability (instead of focusing only on *mens rea*) and applying that model systematically to environmental criminal law.

⁹³ Lazarus, *Integration*, *supra* note 4, at 2420-40.

⁹⁴ *Id.* at 2420.

⁹⁵ *Id.* at 2421-22.

⁹⁶ Professor Mueller makes a similar point when he characterizes environmental crime as a "crime of accretion": "[I]ndividual offenders threaten an overall harm by individual contributions. This accretion of individual pollutants results in overall harmful consequences." Mueller, *supra* note 24, at 21.

⁹⁷ Lazarus, *Integration*, *supra* note 4, at 2422-23.

Nor would elimination of all pollution be a desirable result. Many socially beneficial activities cause pollution, either indirectly or directly. . . . Pollution regulations seek to limit and redirect pollution. They do not seek to eliminate pollution altogether, except in those rare circumstances in which the activity causing the pollution is both avoidable and offers no net societal benefit. . . .

Few individuals could reasonably claim not to be the source of significant pollution in their daily activities. At the very least, virtually everyone adds to consumer demand that induces sellers of goods and services to pollute to meet that demand. Virtually all sectors of the economy, including agriculture, construction, education, forestry, fishing, manufacturing, mining, medical services, transportation, utilities,⁹⁸ and the government itself, are important contributors to environmental degradation.

In light of pervasiveness and inevitability, pollution cannot be regarded in any meaningful sense as an activity that is morally blameworthy *per se*. Instead, culpability must be assessed through a much more complicated, context-driven analysis.

Third, many environmental laws are *aspirational* in their objectives, rejecting traditional practices in an attempt to achieve “dramatic improvements in environmental quality.”⁹⁹ For instance, in 1972, the CWA declared as one of its objectives that all waters be safely fishable and swimmable by 1983 and all discharges of water pollution be terminated by 1985.¹⁰⁰ The nation has failed to comply with this timetable, as it has failed to achieve many other environmental objectives.¹⁰¹ While the aspirational features of environmental laws—the “overly ambitious goals, unrealistic deadlines, and uncompromising and unduly rigid standards,” as Lazarus puts it—have arguably forced much beneficial technological and social change, they do raise questions about whether all violators are necessarily blameworthy for failing to comply with the laws.¹⁰² Indeed, many environmental regulations seem to produce such marginal and uncertain risk reduction that the social costs of compliance arguably outweigh the benefits.¹⁰³

⁹⁸ *Id.*; see also Michael P. Vandenberg, *From Smokestack to SUV: The Individual as Regulated Entity in the New Era of Environmental Law*, 57 VAND. L. REV. 515, 518 (2004) (“We are polluters. Each of us. . . . Industrial sources continue to be major sources of pollution . . . but individuals are now the largest remaining source of many pollutants.”).

⁹⁹ Lazarus, *Integration*, *supra* note 4, at 2424; see also John P. Dwyer, *The Pathology of Symbolic Legislation*, 17 ECOLOGY L.Q. 233, 233 (1990) (discussing various environmental statutes as “more symbolic than functional”).

¹⁰⁰ 33 U.S.C. §§ 1251(a)(1)-(2) (1987).

¹⁰¹ Dwyer, *supra* note 99, at 235; Lazarus, *Integration*, *supra* note 4, at 2425.

¹⁰² Lazarus, *Integration*, *supra* note 4, at 2426.

¹⁰³ See Darryl K. Brown, *Cost-Benefit Analysis in Criminal Law*, 92 CAL. L. REV. 323, 333 (2004). Some EPA regulations result in billions of dollars of costs per expected life saved. STEPHEN BREYER, *BREAKING THE VICIOUS CIRCLE* 27 (1993). Indeed, some

Fourth, environmental law is notoriously *complex*.¹⁰⁴ Lazarus identifies four distinct dimensions to the complexity.¹⁰⁵ Environmental law is *technical*, meaning that the statutes and regulations (owing to their dependence on science, engineering, and economics) require “special sophistication or expertise on the part of those who wish to understand and apply them.”¹⁰⁶ Environmental law is also *indeterminate*, meaning that “outcomes are hard to predict”; “[t]he jurisdictional boundaries of most environmental laws . . . tend to turn on questions of degree that are, at best, gray at the border.”¹⁰⁷ Thus, for instance, as one EPA official famously said of RCRA’s key jurisdictional term, “[there are] only five people in the agency who understand what ‘hazardous waste’ is. What’s hazardous one year isn’t [the next]—[what] wasn’t hazardous yesterday, is hazardous tomorrow”¹⁰⁸

Adding to the complexity, environmental law is also *obscure*, meaning that it is difficult even to locate relevant sources of the law.¹⁰⁹ Lazarus observes:

This obscurity stems from the sheer density of environmental rules and their obscure, often inaccessible source materials.

There are, for instance, approximately 1000 pages of RCRA regulations, 4000 pages of Clean Air Act regulations, and 2400 pages of Clean Water Act regulations. . . .

EPA’s regulations are merely the most formal and visible peaks in a vast range of underground and fragmented agency guidance on the meaning of the relevant statutory and regulatory provisions. For instance, EPA’s preambles (overviews of the agency’s plans to implement specific titles) do not appear in the Code of Federal Regulations, but EPA often provides much detailed guidance in these documents. The preambles tend to be far lengthier than the rules themselves. . . .

regulations may even result in a net loss from the standpoint of public health alone. For instance, in light of the risks to asbestos-removal workers and passersby, the removal of asbestos from buildings may sometimes cause higher risks of disease than simply leaving the asbestos in place. *Id.* at 23. Moreover, insofar as regulation results in losses of income, regulation may have additional “adverse health effects, in the form of poorer diet, more heart attacks, more suicides.” *Id.*

¹⁰⁴ Lazarus, *Integration*, *supra* note 4, at 2428.

¹⁰⁵ *Id.* at 2428-39. Here, Lazarus employs a framework that is based on Professor Schuck’s work on complexity. *See, e.g.*, PETER H. SCHUCK, *THE LIMITS OF LAW: ESSAYS ON DEMOCRATIC GOVERNANCE* 4-5 (2000).

¹⁰⁶ Lazarus, *Integration*, *supra* note 4, at 2429-30.

¹⁰⁷ *Id.* at 2431.

¹⁰⁸ *Id.* at 2434 (quoting Don R. Clay, EPA Assistant Administrator for the Office of Solid Waste and Emergency Response). These comments were part of the court record in *United States v. White*. *See* *United States v. White*, 766 F. Supp. 873, 882 (E.D. Wash. 1991).

¹⁰⁹ Lazarus, *Integration*, *supra* note 4, at 2436.

The lengthy preambles just begin to suggest the extent of underground environmental law. EPA routinely issues informal guidance memoranda and letters to deal with complex issues on a case-by-case basis.¹¹⁰

Finally, environmental law's *institutional differentiation* also contributes to its complexity.¹¹¹ Lazarus refers, for instance, the "multiple personality disorder" of environmental law.¹¹² At the federal level, numerous agencies (EPA; the Departments of Agriculture, Energy, and Interior; the Army Corps of Engineers; and several others) share responsibility for implementing environmental law, which generates "considerable friction and confusion."¹¹³ Making matters even more confusing, the federal government has delegated the day-to-day responsibilities for administering many environmental statutes to state, tribal, and local governments.¹¹⁴ All of this means that the regulated community may receive mixed messages from the government, and may not know where to turn to get authoritative responses to legitimate questions about the law.¹¹⁵

¹¹⁰ *Id.* at 2436-37.

¹¹¹ *Id.* at 2438.

¹¹² *Id.*

¹¹³ *Id.* at 2439.

¹¹⁴ *Id.* at 2438.

¹¹⁵ Professor Brickey, in arguing that assertions about the complexity of environmental law are exaggerated, suggests that critics exhibit "naivete about the degree of precision and certainty found in federal criminal law." Brickey, *Rhetoric*, *supra* note 4, at 127. She observes: "[I]nterpretive questions about fundamental elements of crimes constantly arise, not just in the context of relative newcomers like the environmental criminal provisions, but also in the context of statutes that have been the mainstay of federal prosecutors for more than a century." *Id.* at 127-28. She further notes that appeals in environmental prosecutions have been rare, suggesting that, if violations are so uncertain, then we would see more convicted defendants "put the dice in the box for another throw" at the appellate level. *Id.* at 135-37. The argument should be read with caution. About ninety-five percent of environmental convictions result from guilty pleas. U.S. SENTENCING COMM'N, 2001 SOURCEBOOK OF FEDERAL SENTENCING STATISTICS 24 (2003). Thus, the vast majority of environmental defendants bargain away their rights to contest liability in the appellate system. Additionally, because so many defendants benefit from sentencing departures, *see infra* Part IV.D, defendants may be reluctant to appeal on liability issues, which might invite a cross-appeal on the sentence. Finally, a temporal disconnect should be noted: just because a defendant does not find it worthwhile to litigate interpretive questions *after* conviction does not necessarily mean that the law was clear *before* the alleged violations occurred. Indeed, because the relevant government agency will have taken a clear position on the meaning of the relevant legal requirements for purposes of litigation (even if such a clear position was not developed previously), savvy defendants will realize they face a particular burden at the appellate level in overcoming judicial deference to agency interpretations of technical statutes. *See United States v. Mead Corp.*, 533 U.S. 218 (2001) (discussing scope of judicial deference to agency interpretation); Lawrence M. Solan, *Statutory Inflation and Institutional Choice*, 44 WM. & MARY L. REV. 2209, 2250-51 (2003) (discussing deference

In addition to those noted by Lazarus, a fifth general characteristic merits discussion: environmental law adopts an *adversarial* stance towards the regulated community. Rather than simply articulating standards and trusting regulated polluters to comply, environmental law assumes the need for close monitoring and regular enforcement.¹¹⁶ Environmental statutes routinely require polluters to obtain permits before even building new, or modifying existing, polluting facilities.¹¹⁷ Polluters are required to monitor their discharges and keep careful records of what they have done when.¹¹⁸ Reports and disclosures must be made according to strict timetables.¹¹⁹ Polluters, in short, are subject to a host of “second-order” regulations: administrative requirements that do not do anything directly to protect the environment, but that are instead designed to ensure compliance with the first-order regulations that *do* regulate the discharge of pollution. Additionally, polluters are subject to detailed regulations that require the use of particular technologies and techniques for treating, handling, and discharging wastes; environmental law establishes not only the “ends” of how much of which pollutants can be discharged into the environment, but also, to a considerable extent, the means that must be employed to achieve those ends.¹²⁰

of courts to agency interpretations in environmental criminal cases as offsetting rule of lenity and legislative intent).

In the end, complexity in the law defies straightforward measurement, *see* SCHUCK, *supra* note 105, at 5 (“Complexity is multi-dimensional, and its dimensions cannot easily be measured, much less weighted.”), and a definitive resolution of the Brickey-Lazarus dispute lies beyond the scope of this Article. Still, while we might agree with Brickey that indeterminacy is not unique to environmental law, the technicality, obscurity, and institutional differentiation issues identified by Lazarus would seem to apply with special force in the environmental context.

¹¹⁶ EPA’s critics argue that the agency has adopted the same sort of adversarial stance that is embodied in the law in its interactions with the regulated community. One commentator puts it this way:

EPA is dominated by a [model] based on the stick rather than the carrot, and on harsh penalties rather than assistance with compliance. This law enforcement model is based on dark premises. It regards the private sector as a collection of profit maximizers who will seize any opportunity to break the rules.

JAMES V. DELONG, *OUT OF BOUNDS, OUT OF CONTROL* 4 (2002). However, this pessimistic view of EPA is disputed by other commentators. *See, e.g.*, RECHTSCHAFFEN & MARKELL, *supra* note 72, at 81-83.

¹¹⁷ *See, e.g.*, 42 U.S.C. § 7412(g)(2) (1999) (CAA hazardous air pollutants program).

¹¹⁸ *See, e.g.*, 33 U.S.C. § 1318(a) (1987) (CWA discharge monitoring).

¹¹⁹ *See, e.g.*, 42 U.S.C. § 9603(a) (1996) (CERCLA reporting requirements).

¹²⁰ *See, e.g.*, 33 U.S.C. § 1311(b) (1999) (CWA effluent regulations); *see supra* Part I.A (providing examples of specific requirements of RCRA regulations).

These mistrustful, adversarial tendencies of the law may have a number of implications for culpability. First, because regulations are pervasive, opportunities for violations at regulated facilities are pervasive; hence, 100% compliance may not be a realistic expectation.¹²¹ Second, the law imposes a multitude of *affirmative* legal duties on regulated facilities, in contrast to the negative prohibitions that constitute the bulk of the general criminal law. Indeed, outside the environmental context, the law has traditionally been quite reluctant to treat omissions as criminally culpable in the same way as intentional acts.¹²² Third, if violations of the first-order prohibitions of environmental law (“do not discharge more than x amount of y pollutant in z period of time”) typically give rise to relatively remote risks of injury, violations of second-order regulations (record-keeping and reporting requirements) are yet that much further removed from the sorts of actual harm with which the criminal law usually concerns itself.

B. CULPABILITY IN GENERAL

As noted earlier, “culpability” refers to the blameworthiness of a defendant’s conduct.¹²³ In order to facilitate systematic treatment of the subject, I will employ a formal model of culpability, but, ultimately, culpability should be measured by reference to shared community intuitions about what is blameworthy and why.¹²⁴ Before describing the model, though, this Section will offer some preliminary thoughts as to why our criminal justice system should care about the relative culpability of different forms of criminal conduct.

1. *Why We Should Care About Culpability*

Culpability potentially matters for at least three reasons. First, it is morally repugnant to punish a person for conduct that is not at all blameworthy.¹²⁵ Second, a person ought not receive a *degree* of punishment that is disproportionately large relative to the culpability of the

¹²¹ This point is developed further in Part VI.B.2, *infra*.

¹²² See Sandra Guerra Thompson, *The White-Collar Police Force: “Duty to Report” Statutes in Criminal Law Theory*, 11 WM. & MARY BILL RTS. J. 3, 54-57 (2002) (discussing objections to criminalizing omissions and suggesting that Supreme Court has used an interest-balancing test to assess constitutionality of criminalizing “wholly passive” conduct).

¹²³ See, e.g., GROSS, *supra* note 84, at 76 (defining culpability as blameworthiness).

¹²⁴ Paul H. Robinson & John M. Darley, *The Utility of Desert*, 91 NW. U. L. REV. 453, 489-90 (1997).

¹²⁵ See, e.g., Husak, *supra* note 88, at 28. The principle is thought to have such obvious force that it has become the chief objection to consequentialist theories of punishment. Russell L. Christopher, *Deterring Retributivism: The Injustice of “Just” Punishment*, 96 NW. U. L. REV. 843, 870 (2002).

conduct that is being punished (the “negative proportionality principle”).¹²⁶ Third, and more controversially, a person ought not receive a degree of punishment that is disproportionately *small* relative to the culpability of the conduct that is being punished (the “positive proportionality principle”).¹²⁷ In considering minimally culpable environmental offenses, the second principle is of particular importance, for negative proportionality would suggest that such offenses do not merit severe criminal penalties.

These principles are most closely associated with retributive theories of punishment, but even critics of retribution have acknowledged the appeal of proportionality.¹²⁸ Indeed, while the proportionality principles have been defended on various deontological grounds,¹²⁹ there are also good consequentialist reasons to care about culpability. Professors Robinson and Darley have been particularly forceful proponents of this view. They emphasize the connection between culpability-based punishment and compliance with society’s rules of conduct.¹³⁰ They argue that people

¹²⁶ See, e.g., R.A. DUFF, PUNISHMENT, COMMUNICATION, AND COMMUNITY 137-38 (2001) (describing this principle as “negative proportionality”); MICHAEL MOORE, PLACING BLAME: A GENERAL THEORY OF THE CRIMINAL LAW 247 (1997) (“Culpability sets the outer limits of desert, and thus, of proportionate punishment.”); Lawrence Crocker, *The Upper Limit of Just Punishment*, 41 EMORY L.J. 1059, 1060 (1992) (“It would be unjust to punish shoplifters capitally, even if the existence of such a penalty would drastically reduce the incidence of shoplifting so as to maximize total utility.”); Andrew Von Hirsch, *Penal Theories*, in THE HANDBOOK OF CRIME AND PUNISHMENT 659, 663 (Michael Tonry ed., 1998) (discussing emergence of this principle in last three decades as limitation on consequentialist approaches to punishment).

¹²⁷ See, e.g., DUFF, *supra* note 126, at 137-38 (describing this principle as “positive proportionality” and noting the theoretical debate over whether proportionality should be merely negative).

¹²⁸ As Professor Christopher has recently written, “[t]hrough retributivism’s rationale for the proportionality principle is undoubtedly thin (and perhaps nonexistent), that punishment should be in some way proportional to the crime is an intuition (like the wrong of punishing the innocent) that is so widely shared as to make its attack unpersuasive.” Christopher, *supra* note 125, at 891-92; see also Edward Rubin, *Just Say No to Retribution*, 7 BUFF. CRIM. L. REV. 17, 49-54 (2003) (arguing in favor of proportionality as an *alternative* to retribution). The appeal of the negative proportionality is sufficiently great that many scholars have developed “hybrid” theories that blend negative proportionality with consequentialist approaches. See, e.g., Crocker, *supra* note 126, at 1062.

¹²⁹ See, e.g., MOORE, *supra* note 126, at 91 (“We are justified in punishing because and only because offenders deserve it. . . . [T]he moral responsibility of an offender also gives society the *duty* to punish.”); Crocker, *supra* note 126, at 1073 (“Reciprocity, like equality and liberty, is part of our sense of justice.”); Jean Hampton, *The Retributive Idea*, in FORGIVENESS AND MERCY 111, 124-38 (Jeffrie G. Murphy & Jean Hampton eds., 1988) (arguing that proportionate punishment serves to deny offender’s claim to elevation over the victim); Von Hirsch, *supra* note 126, at 666-67 (arguing that proportionality serves ethical goals of penal censure).

¹³⁰ Robinson & Darley, *supra* note 124, at 457-58.

comply with rules, not because they fear formal criminal sanctions, but, rather, because they have internalized society's norms or are otherwise constrained by informal social controls.¹³¹ The criminal justice system helps to sustain this process to the extent that it facilitates and communicates societal consensus on moral norms and to the extent that citizens defer to the criminal law as an authoritative statement of such norms.¹³² Yet, the criminal law cannot function effectively in these respects unless it possesses moral credibility, i.e., unless "it assigns liability and punishment in ways that the community perceives as consistent with the community's principles of appropriate liability and punishment."¹³³ Thus, a criminal justice system that assigns punishment without regard to the community's views of moral blameworthiness will ultimately fail as a system of crime control.¹³⁴

I will argue below that Robinson and Darley's consequentialist reasoning applies with particular force in the environmental field.¹³⁵ For the time being, these preliminary views should provide some sense of why we might appropriately be concerned with laws that treat minimally culpable conduct as felonious.

2. *A Four-Dimensional Model of Culpability*

Culpability scholars have proposed a variety of models for the factors that are or ought to be considered in determining punishment.¹³⁶ These

¹³¹ *Id.* at 457; see also John C. Coffee, Jr., *Does "Unlawful" Mean "Criminal"?: Reflections on the Disappearing Tort/Crime Distinction in American Law*, in CORPORATE AND WHITE-COLLAR CRIME: AN ANTHOLOGY 53, 53 (Leonard Orland ed., 1995) ("The criminal law is obeyed not simply because there is a legal threat underlying it, but because the public perceives its norms to be legitimate and deserving of compliance.").

¹³² Robinson & Darley, *supra* note 124, at 457.

¹³³ *Id.*

¹³⁴ A number of empirical researchers have provided support for the view that compliance with a law is related to perceptions of the government's trustworthiness. See, e.g., TOM R. TYLER, *WHY DO PEOPLE OBEY THE LAW* 111 (1990); John T. Scholtz & Mark Lubell, *Trust and Taxpaying: Testing the Heuristic Approach to Collective Action*, 42 AM. J. POL. SCI. 398 (1998).

¹³⁵ See *infra* Part VI.B.1. Another interesting effort to establish a utilitarian justification for culpability-based punishment comes from the burgeoning expressive law and economics literature. See, e.g., Vikramaditya S. Khanna, *Should the Behavior of Top Management Matter?*, 91 GEO. L.J. 1215, 1250 (2003) ("[M]embers of society prefer stricter punishment of the more culpable relative to the less culpable. . . . [S]atisfying this preference may be said to increase social welfare.").

¹³⁶ See, e.g., Green, *supra* note 87, at 1547 ("I shall divide the moral content of criminal conduct into three broad and often overlapping categories referred to as: (1) culpability, (2) social harmfulness, and (3) moral wrongfulness."); Loewy, *supra* note 86, at 283 (identifying three central factors in criminal law as culpability, dangerousness and harm).

models differ in terminology and nuance, but there is nonetheless broad consensus as to most of the chief components.¹³⁷ Because it is particularly amenable to the environmental context, I will use the vocabulary and conceptual framework developed by Professor Gross in his influential text *A Theory of Criminal Justice*.¹³⁸ Empirical research on public opinion suggests that factors emphasized by Gross also play an important role in public views about culpability and punishment.¹³⁹

In Gross's model, culpability is a function of four distinct dimensions.¹⁴⁰ The first dimension is *intentionality*.¹⁴¹ Roughly following the Model Penal Code distinctions between purpose, knowledge, recklessness, and negligence, Gross describes four different degrees of culpability along the intent dimension:

In order of decreasing culpability, the conduct in question may be described as [1] intentionally doing what is harmful in that it is aimed at not allowing an escape from the harm; [2] intentionally doing what creates imminent danger of harm; [3] intentionally doing what creates a serious risk of the harm, though not imminent danger of it; and [4] doing intentionally what bears a significant risk of the harm in the absence of adequate care and precaution.¹⁴²

Gross justifies these distinctions based on the defendant's degree of control over the outcome:

[A]s the scale is ascended, conduct of each degree leaves succeedingly less room for chance to determine the occurrence of harm. Because of that the harm (whether actual or in prospect) is attributable to the actor more and more as the scale is ascended. It is then more within or under his control, and it is fair as well as

¹³⁷ See Paul H. Robinson, *The A.L.I.'s Proposed Distributive Principle of "Limiting Retributivism": Does It Mean in Practice Anything Other Than Pure Desert?*, 7 BUFF. CRIM. L. REV. 3, 5 n.5 (2003) ("[A]ll thoughtful desert advocates that I know support the description [of blameworthiness that takes into account full range of culpability, capacity, and situational factors]."); see also *id.* at 13 (noting most dramatic example of disagreement in assessing blameworthiness relates to whether "resulting harm ought to increase punishment").

¹³⁸ GROSS, *supra* note 84.

¹³⁹ For a leading empirical study of community views on culpability and punishment, see PAUL H. ROBINSON & JOHN M. DARLEY, *JUSTICE, LIABILITY, AND BLAME: COMMUNITY VIEW AND THE CRIMINAL LAW* (Westview Press 1995). Professors Robinson and Darley collected the "moral intuitions of more than thirty people" about criminal liability and punishment in connection with several sets of detailed fact patterns. *Id.* at 1. Intersections between this empirical work and Gross's theoretical model will be noted in the footnotes below.

¹⁴⁰ GROSS, *supra* note 84, at 77.

¹⁴¹ *Id.*

¹⁴² *Id.* at 87. The Robinson and Darley study likewise found that offenses are viewed as meriting more severe punishment as they move up the *mens rea* scale. ROBINSON & DARLEY, *supra* note 139, at 95.

reasonable to blame the actor more when the harm is more subject to his control and less a matter merely of chance.¹⁴³

The second dimension is *harm*:

Some harms are more serious than others, and the conduct constituting or threatening more serious harm is therefore more blameworthy. Taking a life is more serious than taking property; and because the harm is greater, criminal homicides are in general more serious and more blameworthy than larcenies.¹⁴⁴

The third dimension is the *dangerousness* of the defendant's conduct.¹⁴⁵ Gross describes three different degrees:

[1] Conduct sometimes *merely* poses a threat of harm, so that there is a present danger of its occurring but nothing more threatening than that. [2] Sometimes there is more, and the danger then seems imminent. [3] Sometimes conduct is even more dangerous than that, and the occurrence of the harm itself can then be said to be imminent. These three degrees of dangerousness might be illustrated by three assassins, the first simply lying in wait for his victim, the second about to shoot at him, and the third actually shooting.¹⁴⁶

Dangerousness is assessed from an objective standpoint: "Reasonable expectations are what the actor knows or should know about the consequences of what he does, and only these expectations determine how dangerous his act is insofar as its dangerousness matters for a judgment of culpability."¹⁴⁷ Generally, this will be a matter of "common-sense expectations," although the "actual probability of harm's occurring" may be relevant "if the actor knows, or should know, what the actual probability is."¹⁴⁸

The fourth dimension of culpability relates to the *legitimacy* of the defendant's conduct.¹⁴⁹ This involves a "weighing-on-balance of the harm that is done or threatened by the conduct in question, while the countervailing legitimate interests that are served by that conduct weigh against the blame."¹⁵⁰ Thus, for instance, automobile driving and tunnel construction "are considered legitimate activities in spite of the fact that

¹⁴³ GROSS, *supra* note 84, at 87-88.

¹⁴⁴ *Id.* at 78. The Robinson and Darley study likewise found that offenses are viewed as meriting more severe punishment as the severity of the harm threatened increases. ROBINSON & DARLEY, *supra* note 139, at 32, 159.

¹⁴⁵ GROSS, *supra* note 84, at 78.

¹⁴⁶ *Id.* at 79. The Robinson and Darley study likewise found that offenses are viewed as meriting more severe punishment as the risk of the harm increases. ROBINSON & DARLEY, *supra* note 139, at 32.

¹⁴⁷ GROSS, *supra* note 84, at 79.

¹⁴⁸ *Id.*

¹⁴⁹ *Id.* at 80.

¹⁵⁰ *Id.*

they claim many lives even when every precaution is taken. Since the interests they serve are considered very important, these activities are not regarded as blameworthy.”¹⁵¹

Gross contends that, in order for an act to be culpable, it must be culpable in all four dimensions: “Just as there are no physical objects with only one dimension or two, so an act with only one, two, or three dimensions of culpability is not a culpable act at all.”¹⁵² Where an act *is* culpable in all four dimensions, Gross’s framework also provides a basis for comparing the *degree* of blameworthiness of that act with that of other culpable acts:

Just as the size of two physical objects may be compared by measuring them in each of their dimensions, so the culpability of two acts may be compared by seeing how extensive each act is in each dimension of its culpability. But comparisons of culpability among acts must remain a far cruder affair than comparisons of size among tables and oranges. We do not have common units of measure either for the four dimensions of culpability or for overall culpability, nor do we have ways of calculating overall culpability by computing culpability in each dimension. Nevertheless, we do make rough determinations as best we can. . . . The question of whether taking life recklessly is more culpable than destroying property purposely may seem unmanageably abstract, and we may feel in need of more detailed information before we can answer it, but we are not in the dark about what sort of things will matter in arriving at an answer.¹⁵³

C. APPLYING THE MODEL: MINIMALLY CULPABLE ENVIRONMENTAL OFFENDERS

Using Gross’s framework, the substantive definition of environmental crimes may be viewed in a new light. Environmental defendants may be held criminally liable under the environmental statutes even though one or more of the culpability dimensions is lacking, or present to only a very limited and contestable extent. In these “minimal culpability” cases, the moral blameworthiness of the defendant’s conduct (if any) would flow chiefly from the fact that an environmental regulation was violated, and not from other sorts of harms that would be recognized as substantial concerns

¹⁵¹ *Id.* at 81.

¹⁵² *Id.* Gross has perhaps overstated his position here, and we may thus find more persuasive Green’s comparatively modest suggestion that each dimension of culpability “represents a *significant* part of the moral content of the criminal law,” even it should not be viewed as a necessary precondition to criminal punishment. Green, *supra* note 87, at 1553 (emphasis added). As my project is to identify low-culpability environmental offenders, and I make no claims as to zero-culpability offenders, the choice between Gross’s and Green’s formulation may not matter much for present purposes.

¹⁵³ GROSS, *supra* note 84, at 82.

outside the regulatory framework.¹⁵⁴ Each of the four dimensions is considered separately below.

1. Harm

Environmental offenses may give rise to a wide range of different types of harm.¹⁵⁵ After considering these different categories of harm, this Section describes circumstances in which an environmental defendant may be held criminally liable despite threatening little or no actual harm.

a. A Taxonomy of Environmental Harm

First, and perhaps most compelling, environmental offenses may cause *immediate physical injury* to people, up to and including death. Environmental laws regulate many substances that are directly and demonstrably harmful when humans come into contact with them. The unlawful mishandling of such substances may result in serious injuries.¹⁵⁶ For instance, in *United States v. Rutana*, the defendant was convicted of illegally discharging highly acidic and alkaline wastewater into a city sewer line.¹⁵⁷ At the other end of the line, two employees of the sewage treatment plant were burned when they came into contact with the illegal discharges.¹⁵⁸

Second, environmental offenses may cause *future physical injuries* to people.¹⁵⁹ Indeed, one of the most important differences between environmental and other criminal offenses is the capacity of environmental violations to produce the gravest of injuries many years, or even decades, after the completion of the offense.¹⁶⁰ For instance, in *United States v.*

¹⁵⁴ See *supra* note 88.

¹⁵⁵ Gross defines "harm" as "an untoward occurrence consisting in a violation of some interest of a person." GROSS, *supra* note 84, at 115.

¹⁵⁶ Based on survey data, the public believes such harms should result in longer sentences for environmental crimes. PETER H. ROSSI & RICHARD A. BERK, PUBLIC OPINION ON SENTENCING FEDERAL CRIMES 121 (1995).

¹⁵⁷ 18 F.3d 363, 364 (6th Cir. 1994).

¹⁵⁸ *Id.*

¹⁵⁹ This category of harm might, in turn, be divided into two subcategories: (1) an immediate injury from exposure that does not manifest itself until some time in the future; and (2) an injury that truly does not occur until some considerable time after the offense conduct. By way of illustrating the latter subcategory, consider this hypothetical scenario: a toxic pollutant is illegally discharged into a lake and enters the body of a fish, the fish is consumed by a person several weeks later, and the diner then becomes ill as a result of exposure to the toxin.

¹⁶⁰ See Lazarus, *Integration*, *supra* note 4, at 2420 ("But what distinguishes environmental pollution from conduct classically addressed by criminal laws . . . are the spatial and temporal dimensions of the harm that it causes.").

Thorn, the owner of an asbestos abatement service was convicted under the CAA for violations of asbestos removal regulations.¹⁶¹ At sentencing, the government's expert testified that, while asbestos-related diseases usually do not appear until twenty-five to thirty years after exposure, there was a "virtual certainty" that at least some of the defendant's 700 employees would eventually become ill.¹⁶²

Third, environmental offenses may cause *emotional distress* due to fear of future injuries. This category of harm, which is closely related to the prior category, likewise distinguishes environmental crimes from most traditional types of crime. As one commentator has observed:

[Toxic substances may] slink in without warning, do no immediate damage so far as one can tell, and begin their deadly work from within—the very embodiment, it would seem, of stealth and treachery. . . . Toxic poisons provoke a special dread because they contaminate, because they are undetectable and uncanny and so can deceive the body's alarm systems, and because they can become absorbed into the very tissues of the body and crouch there for years, even generations, before doing their deadly work.¹⁶³

Viewed in such a light, the special anxiety provoked by environmental contamination constitutes a harm in and of itself, without regard to whether the feared future injury actually occurs. Indeed, individuals who have been exposed to toxic substances report not only emotional responses, such as depression and anxiety, but also a range of physical ailments associated with emotional distress, such as insomnia, fatigue, headaches, diarrhea, and muscle pain.¹⁶⁴

Fourth, environmental offenses may cause *disruptions in social and economic activities*. Most dramatically, for instance, the release of hazardous chemicals into the environment may result in the evacuation of an entire community. Even when members of the community are spared any physical injury, the evacuation likely represents, at the very least, a considerable inconvenience to everyone involved. Environmental offenses may also give rise to less dramatic disruptions. For instance, in *United States v. Wells Metal Finishing, Inc.*, the defendant's illegal discharge of

¹⁶¹ 317 F.3d 107, 111 (2d Cir. 2003).

¹⁶² *Id.* at 114-15. Whether such future injuries should be "discounted" relative to immediate injuries has been the subject of robust debate. For a description of the debate, see Richard L. Revesz, *Environmental Regulation, Cost-Benefit Analysis, and the Discounting of Human Lives*, 99 COLUM. L. REV. 941, 950-55 (1999).

¹⁶³ Kai Erikson, *Toxic Reckoning: Business Faces a New Kind of Fear*, HARV. BUS. REV., Jan.-Feb. 1990, at 122.

¹⁶⁴ Lisa Heinzerling, *Environmental Law and the Present Future*, 87 GEO. L.J. 2025, 2034-35 (1999).

wastes into city sewers impaired the operations of a municipal sewage treatment plant.¹⁶⁵

Fifth, environmental offenses may result in the incurrence of *remediation costs*.¹⁶⁶ Illegal environmental contamination may need to be cleaned up in order to minimize the risks of future physical injury and other harms. Indeed, the owner of a contaminated property may be legally obligated to perform cleanup operations.¹⁶⁷ Remediation costs vary considerably depending on the nature of the contamination, but may reach well into the millions of dollars.¹⁶⁸

Sixth, environmental offenses may cause *property damage*. Contamination may diminish the utility and aesthetic value of property, as by destroying vegetation, damaging buildings, and even creating an "environmental stigma" that discourages the use and development of formerly contaminated property that has been cleaned up.¹⁶⁹

Seventh, environmental offenses may cause *ecological damage*. Intended to encompass injuries to the natural environment resulting from illegal discharges of contaminants, this is an admittedly broad, amorphous, and contentious category. Defined most broadly, this category might include harm to air, water, soil, flora, fauna, and the interaction between

¹⁶⁵ 922 F.2d 54, 56 (1st Cir. 1991).

¹⁶⁶ "Remediation is the process of restoring a degraded site to some specified standard of cleanliness or a lower degree of potential harm." Tim Carter, *Policing the Environment, in ENVIRONMENTAL CRIME: ENFORCEMENT, POLICY, AND SOCIAL RESPONSIBILITY* 169, 170 (Mary Clifford ed., 1998).

¹⁶⁷ See, e.g., 42 U.S.C. § 9606(a) (2002) (authorizing President to seek abatement of "imminent and substantial endangerment to the public health or welfare or the environment because of an actual or threatened release of a hazardous substance").

¹⁶⁸ For instance, the average cleanup cost for sites on the National Priorities List exceeds \$30 million. Richard L. Revesz & Richard B. Stewart, *The Superfund Debate, in ANALYZING SUPERFUND: ECONOMICS, SCIENCE, AND LAW* 3, 14 (Richard L. Revesz & Richard B. Stewart eds., 1995).

¹⁶⁹ See Jennifer L. Young, *Stigma Damages: Defining the Appropriate Balance Between Full Compensation and Reasonable Certainty*, 52 S.C. L. REV. 409, 409-10 (2001) (describing stigma damages and debate over the compensability in tort suits). Based on survey data, the public believes that private property damage should result in longer sentences for environmental crimes. ROSSI & BERK, *supra* note 156, at 121.

Despite considerable overlap between this category and the category of social and economic disruption, the two categories are not coterminous. When a vacant lot becomes an illegal dumping ground, for instance, no disruption necessarily results, but the value of the vacant lot and other nearby properties is likely diminished. Similarly, when a community is evacuated in response to an environmental threat, there may be no actual property damage, even though a disruption has surely occurred. The property damage category also overlaps with the category of remediation costs. On the one hand, remediation costs are incurred, at least in part, to address damage to property. On the other hand, the fear of liability for remediation costs is one reason that contaminated property loses market value.

them, as well as impairment of the “characteristic aspects of the landscape” and impairment of the lifestyle of indigenous communities.¹⁷⁰ As other commentators have noted, this type of harm has traditionally not received nearly as sophisticated consideration in the legal system as have others.¹⁷¹ For instance, many environmental compensation regimes “have not really involved recognition of harm to the environment at all, but have been concerned with the infringement of established human interests relating to the person or property caused through the medium of the environment”¹⁷²—precisely the sorts of harm embodied in the six categories discussed above. This traditional view in the law, however, is increasingly giving way to a more expansive recognition of environmental harm.¹⁷³

Ecological harm may be divided into several subcategories. First, ecological harm encompasses the impairment of environmental *use values*.¹⁷⁴ People participate in a variety of activities in the natural environment, such as bird-watching and hunting. Degrading the quality of the environment (by, for instance, filling in an ecologically rich wetland) may reduce the ability of people to enjoy such outdoors activities, thus constituting an impairment of environmental use values.¹⁷⁵ Second, ecological harm encompasses the impairment of *nonuse values*. Professor Hanley describes the concept as follows:

¹⁷⁰ Michael Bowman, *The Definition and Valuation of Environmental Harm: An Overview*, in ENVIRONMENTAL DAMAGE IN INTERNATIONAL AND COMPARATIVE LAW: PROBLEMS OF DEFINITION AND VALUATION 1, 13 (Michael Bowman & Alan Boyle eds., 2002) [hereinafter ENVIRONMENTAL DAMAGE].

¹⁷¹ *Id.* at 12-13.

¹⁷² *Id.* at 13.

¹⁷³ *Id.*; see also Nick Hanley, *The Economic Value of Environmental Damage*, in ENVIRONMENTAL DAMAGE, *supra* note 170, at 27, 30-31 (discussing range of uses of environmental valuation in policy-making and legal processes that have been developed since 1970s).

¹⁷⁴ Hanley, *supra* note 173, at 27.

¹⁷⁵ The harm may be particularly compelling when indigenous peoples are involved. In such cases, injury to use values may mean more than just impaired recreational opportunities; instead, the harm may include impairment of subsistence livelihoods, as well as important cultural and spiritual activities. Claims of this nature were advanced by native Alaskans in the *Exxon Valdez* oil spill case. Gunther Handl, *Indigenous Peoples' Subsistence Lifestyle as an Environmental Valuation Problem*, in ENVIRONMENTAL DAMAGE, *supra* note 170, at 85. While the claim was unsuccessful in the *Exxon* case, similar claims have been accepted by courts in other nations. *Id.* at 86.

While harm to use value is usually associated with damage to undeveloped, natural areas, such harm may also occur in developed areas. For instance, air pollution from an urban factory may cause foul smells that reduce the ability of the factory's neighbors to enjoy outdoor recreation opportunities in the city. Based on survey data, the public believes such harms should result in longer sentences for environmental crimes. ROSSI & BERK, *supra* note 156, at 121.

[People] derive contentment from knowing that environmental resources are preserved, even if they will never directly use them. For instance, I am happier if I know that Antarctica will be protected for its wilderness qualities, rather than being exploited for energy and mineral reserves. . . . Many people donate to conservation charities concerned with protecting wildlife they will never directly experience, such as tigers or whales, or with protecting natural areas they will never travel to.¹⁷⁶

When such resources are lost or degraded, those who value their existence suffer injury as result.¹⁷⁷

Third, ecological harm encompasses the impairment of *economic production values*:

Many firms employ production processes which include the environment as an input. For instance, farmers' outputs of crops depend partly on environmental factors such as rainfall, soil fertility, and temperature. Changes in these factors can be expected to produce potential changes in marketed output. . . . Similarly, fishermen's profits may depend partly on water quality and partly on fish population dynamics. Changes in either of these (attributable, for instance, to pollution spills) will have impacts on profits.¹⁷⁸

Most controversially, ecological harm may encompass the impairment of the *intrinsic value* of natural organisms and ecosystems:

[This] is understood to represent the value which an entity possesses *of itself, for itself* and consequently does not depend upon the existence of an external valuer at all. Rather, entities which exhibit this form of value can be said to possess a *good of their own*, the sense that they themselves are capable of being harmed or benefited by the treatment to which they are subjected. . . . "If something is characterised as intrinsically valuable then it is simply analytic that, other things being equal, it should

¹⁷⁶ Hanley, *supra* note 173, at 27. Commentators distinguish among various types of nonuse values, including existence value (knowing that an environmental resource exists), option value (knowing that a resource may be available for future use), and bequest value (knowing that a resource will be available for future generations). Jason J. Czarnezki & Adrienne K. Zahner, *The Utility of Nonuse Values in Natural Resource Damage Assessments*, 32 B.C. ENVTL. AFF. L. REV. (forthcoming 2005).

¹⁷⁷ David A. Dana, *Existence Value and Federal Preservation Regulation*, 28 HARV. ENVTL. L. REV. 343, 345 (2004). As further evidence of this point, Professor Dana notes the very fact that natural resources have been protected through federal political processes indicates that political constituencies must attribute a high value to their preservation. *Id.* at 346.

Economists have produced a considerable body of theoretical and empirical literature regarding the proper measurement of nonuse values—a difficult matter in light of the absence of markets to set prices for, e.g., wilderness preservation. Hanley, *supra* note 173, at 28. For a summary of competing methodological approaches, see *id.* at 29-33. Common approaches may be both costly to implement and ultimately unreliable. See *id.* at 33-36 (discussing lengthy trial over quantification of harm from oil spill; trial involved competing evidence from different teams of economists making different assumptions and employing different models).

¹⁷⁸ *Id.* at 29.

not be destroyed or prevented from existing. It has a prima facie claim to our moral consideration."¹⁷⁹

Assuming this to be true, there may be a cognizable harm whenever an organism or ecosystem is injured, even in the absence of any use, existence, or production value. The proposition has given rise to a robust theoretical debate,¹⁸⁰ and also presents important practical difficulties in measuring the harm.¹⁸¹ For present purposes, we need not resolve such difficulties, but merely note the impairment of intrinsic value as at least a potentially cognizable form of ecological harm.¹⁸²

Finally, beyond these types of harm that may occur without regard to the existence of the environmental regulatory system, environmental offenses may also entail *regulatory harms*. These harms, which arise from the relationship of the criminal conduct to the broader regulatory regime, may take any of a variety of forms. For instance, there are the transactional costs to regulatory enforcers of investigating the violation and seeking sanctions. There may also be competitive injury: other firms in the same business as the violator may have been put at a disadvantage by complying with the law when the violator did not. Additionally, violations may diminish public confidence in the efficacy of the regulatory system and promote disrespect for the law.

b. Minimal Harm Environmental Crimes

While environmental violations may cause or threaten the gravest sorts of harm, they need not necessarily do so in order to give rise to criminal

¹⁷⁹ Michael Bowman, *Biodiversity, Intrinsic Value, and the Definition and Valuation of Environmental Harm*, in ENVIRONMENTAL DAMAGE, *supra* note 170, at 41, 43 (quoting MATTHEWS, THE ECOLOGICAL SELF 118 (1991)).

¹⁸⁰ For a discussion of the debate, see *id.* at 46. The concept of intrinsic value has gained some traction in international law in recent years. Alan Boyle, *Reparation for Environmental Damage in International Law: Some Preliminary Problems*, in ENVIRONMENTAL DAMAGE, *supra* note 170, at 17, 20.

¹⁸¹ Bowman, *supra* note 170, at 14. Bowman, however, contends that the measurement is not any more difficult than the measurement of other sorts of harm that is routinely measured in legal proceedings, such as pain and suffering and damage to reputation. *Id.* In any event, one particular point of contention is whether all organisms should be valued the same, or whether more complex organisms should be valued more highly than less complex (with human beings at the top of valuation scale). For a discussion of the debate and an argument that generally favors the former, egalitarian approach, see Bowman, *supra* note 179, at 55-59.

¹⁸² For his part, Gross believes that animals have "interests," and, hence, may be "harmed" in a way that the criminal law may appropriately address. GROSS, *supra* note 84, at 117. Based on survey data, the public also believes such harms should result in longer sentences for environmental crimes. ROSSI & BERK, *supra* note 156, at 122.

liability.¹⁸³ In more legally formal terms, harm is not necessarily an element of the offense. Consider the CWA. The statute's key criminal enforcement provision reads as follows: "Any person who . . . knowingly violates section 1311 [and various other sections of the statute] or any permit condition or limitation implementing any of such sections . . . shall be punished . . . by imprisonment for not more than three years . . ." ¹⁸⁴ No mention is made of harm in this provision. Nor is harm required in order to violate the other sections of the statute incorporated by reference into the criminal liability rule. Section 1311, for instance, merely prohibits the unpermitted "discharge of any pollutant by any person."¹⁸⁵ Indeed, given the statute's broad definition of "discharge" and "pollutant," some critics have suggested that § 1311 prohibits such essentially benign activities as skipping a stone on a lake or pouring hot coffee down a drain.¹⁸⁶

Environmental violations are often thought to fall into two categories: (1) unlawful discharges of substances into the environment, and (2) reporting and record-keeping errors.¹⁸⁷ Both types of violations are criminalized, and both types encompass violations that do not cause or threaten substantial harm.¹⁸⁸

Consider, first, the paperwork violations. In environmental law, reporting and record-keeping requirements are pervasive and often criminally enforceable.¹⁸⁹ As noted above, this is a manifestation of the adversarial stance of the law towards the regulated community.¹⁹⁰ Thus, for

¹⁸³ See Epstein, *supra* note 91, at 154 ("The risks posed by environmental crime vary considerably.").

¹⁸⁴ 33 U.S.C. § 1319(c)(2) (2000).

¹⁸⁵ 33 U.S.C. § 1311(a) (1995).

¹⁸⁶ United States v. Weitzenhoff, 35 F.3d 1275 (9th Cir. 1994) (Kleinfeld, J., dissenting). *But see* United States v. Plaza Health, 3 F.3d 643 (2d Cir. 1993) (holding that § 1311 is not violated when an individual places a pollutant into the water).

¹⁸⁷ There are other types of environmental violations, such as improper storage of hazardous materials, that do not quite fit into either category. Although the two categories cover a broad range of environmental violations, they are not meant to be exhaustive. They are used here merely to help illustrate the main point of this Subsection: environmental law criminalizes much conduct that does not cause or threaten the most serious types of harm.

¹⁸⁸ On this point, American law might be contrasted with Canadian, which requires "serious and dramatic breaches" as a condition of criminal liability. Mueller, *supra* note 24, at 9.

¹⁸⁹ See, e.g., Thompson, *supra* note 122, at 31-35 (describing CERCLA reporting requirements). These characteristics of environmental law reflect broader trends in the law. For instance, Professor Thompson argues that there is a "trend to turn people of many professions (and, increasingly, *all* people who may come upon incriminating information) into a white-collar police force. . . . [R]eporting requirements are quietly and incrementally reshaping American criminal law traditions." *Id.* at 5.

¹⁹⁰ See *supra* Part II.A.

instance, under the authority of the CWA, EPA regulations require companies to produce monthly discharge monitoring reports (“DMRs”).¹⁹¹ A knowing failure to produce a required DMR, or a knowing falsehood in a DMR, can give rise to criminal liability.¹⁹² Such reporting problems often occur when a company is attempting to conceal unlawful discharges into the environment.¹⁹³ But such need not be the case. Paperwork violations might instead be the result of laziness, a desire to conceal problems with monitoring equipment or procedures, or a misunderstanding of legal requirements.¹⁹⁴ Paperwork violations under these sorts of circumstances, i.e., violations that are not intended to conceal other violations, will be referred to here as “pure paperwork” violations.

When the defendant’s conduct constitutes a pure paperwork violation, the harm dimension of culpability appears quite small.¹⁹⁵ Of the categories of harm described above, only regulatory harms are apt to be present when there has been no actual or threatened discharge of substances into the environment. And even the regulatory harms need not be especially substantial. For instance, the violator may not gain any particular competitive advantage merely by committing a paperwork violation (as compared, for instance, to the cost savings that may be had by disposing of hazardous wastes illegally). In any event, regulatory harms must be recognized as generally abstract and diffuse, well short of the gravity of the injuries present in some of the cases discussed above, such as *Rutana* (the case of the burned sewage treatment plant workers) and *Thorn* (the case of the 700 construction workers exposed to asbestos).

While the pure paperwork violations provide the clearest example of minimal-harm environmental offenses, some unlawful discharge cases raise similar concerns. In general, we would probably consider physical injuries (immediate or future) as the most serious of the harm categories described in the previous Subsection.¹⁹⁶ Yet, criminal discharges need not cause or threaten such harm in order to be criminal. This conclusion follows from at least two crucial characteristics of environmental law, reflecting its

¹⁹¹ 33 U.S.C. § 1318(a) (1987).

¹⁹² 33 U.S.C. § 1319(c)(2) (2000).

¹⁹³ See, e.g., *United States v. White*, 270 F.3d 356, 360-61 (6th Cir. 2001) (noting that defendants’ false reports concealed underlying regulatory violations).

¹⁹⁴ As will be discussed *infra* Part II.C.3, mistake of law is generally not a defense to environmental criminal charges.

¹⁹⁵ For an example of one particularly controversial enforcement action based on paperwork violations, see DELONG, *supra* note 116, at 5 (describing sanctioning of small business for paperwork delinquency, even though no pollution occurred and company had relied on contractor to ensure compliance with environmental laws).

¹⁹⁶ Evidence in support of this point is presented *infra* in Part VI.G.

aspirational and adversarial qualities: (1) the law sweeps into its regulatory regime many substances that are essentially benign; and (2) the law does not recognize any liability exception for *de minimis* discharges.¹⁹⁷

Consider the CWA. The statute prohibits the unpermitted “discharge of any pollutant.”¹⁹⁸ The statute then defines “pollutant” as “dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial, municipal, and agricultural waste discharged into water.”¹⁹⁹ While some of these regulated items (e.g., chemical wastes, radioactive materials, industrial waste) seem to encompass precisely the sorts of intrinsically dangerous materials that we would expect to be rigorously regulated, other items in the list (e.g., sand, rock, heat, wrecked equipment, garbage) may seem out of place.²⁰⁰

Or consider RCRA. The statute prohibits the unpermitted disposal of “hazardous waste.”²⁰¹ Knowing violations of this prohibition give rise to criminal liability.²⁰² The term “hazardous waste” is, in turn, defined by EPA regulations, which designate certain listed types of waste as *per se*

¹⁹⁷ See *Chevron, U.S.A., Inc. v. Yost*, 919 F.2d 27, 30 (5th Cir. 1990) (“Whether a spill resulted in actual harm to the environment is irrelevant to the determination of whether [CWA’s] prohibition of discharges of oil in quantities which may be harmful has been violated.”) (quoting *Orgulf Transport Co. v. United States*, 711 F. Supp. 344, 347 (W.D. Ky. 1989)); see also BREYER, *supra* note 103, at 11, 20 (discussing tendency of EPA to regulate low-level health risks, sometimes in lieu of more serious health risks).

¹⁹⁸ 33 U.S.C. § 1311(a) (1995).

¹⁹⁹ 33 U.S.C. § 1362(6) (2000).

²⁰⁰ Based on survey data, it appears that the public would distinguish between environmental crimes based on the intrinsic dangerousness of the materials involved. For instance, when asked about sentencing a hypothetical defendant who discharged warm water into a stream, survey respondents imposed a median sentence of 0.80 years, as against 2.00 years for a discharge of toxic wastewater. ROSSI & BERK, *supra* note 156, at 123.

The problem identified here relates to criminal liability for low-volume discharges of nontoxic substances by a polluter lacking a permit. Polluters who hold a permit may also incur criminal liability for discharges that exceed permitted levels. In such cases, while the discharge as a whole may be substantial, the exceedence (that is, the quantity of the discharge that is in excess of permitted amounts) may be quite insignificant. Put differently, there is no exception to criminal liability for *de minimis* exceedences. Moreover, the discharge limitations contained in environmental permits are typically based on the capabilities of pollution control technology, not on any assessment of the harm threatened by the discharge. Robert M. Sussman, *Science and EPA Decision-Making*, 12 J.L. & POL’Y 573, 579-80 (2004). Thus, it should not be assumed that the difference between a discharge within permit limitations and a discharge exceeding such limitations matters from the standpoint of environmental harm.

²⁰¹ 42 U.S.C. § 6925(a) (1996).

²⁰² 42 U.S.C. § 6928(d) (1986).

“hazardous,” regardless of whether they actually possess any hazardous characteristics.²⁰³ Moreover, EPA regulations generally provide that listed hazardous wastes remain “hazardous wastes” (at least in the eyes of the law) regardless of how they are treated or with what they are mixed.²⁰⁴ Thus, for instance, a waste that is listed as “hazardous” due to its acidity may have its hazardous characteristics removed by being mixed with a base, but would still be considered a “hazardous waste” for purposes of RCRA disposal regulations.²⁰⁵

Even substances that are intrinsically more dangerous than, say, a neutralized acid are only dangerous in proportion to their volume. While we might properly regard as harmful the dumping of a *barrel* of acid into the water near a popular beach, dumping a mere *thimbleful* of the same acid at the same location might present essentially no risk of harm.²⁰⁶ (For that matter, even the barrel would likely pose no risk to *human* health if dumped in the middle of the ocean, suggesting that the relationship between volume and harm is, at least in part, a function of location.) Yet, the environmental laws generally do not require some minimal volume threshold in order to make a discharge unlawful. If the discharge is made in the absence of a required permit, or exceeds what is allowed by permit, then criminal liability may be triggered.

In sum, a range of discharges may be treated as criminal under the environmental statutes, even though (in light of the nature of the substances involved, the volume discharged, and the location of the discharge) they do not cause or threaten any physical injury to people. To be sure, such discharges may be harmful in other senses. A ton of sand is unlikely to injure anyone, but it may destroy an ecologically rich wetland. A neutralized acid sludge, dumped in a public park, would at least be an

²⁰³ 40 C.F.R. § 261.3(a)(2)(ii) (2001).

²⁰⁴ *Id.* § 261.3(b)-(d).

²⁰⁵ Indeed, the Author has himself represented a criminal defendant who was charged with illegal disposal of a hazardous waste under similar circumstances. The defendant responded to an industrial acid spill by neutralizing the acid according to standard emergency protocols. An independent laboratory tested the resulting sludge for hazardous characteristics and found none. Unaware that EPA still considered the neutralized sludge to be “hazardous,” the defendant failed to dispose of the sludge in a licensed hazardous waste disposal facility. While none of the foregoing facts were contested seriously by the government, the defendant was nonetheless indicted for his actions. The case, *State v. Skelley*, was litigated in the Illinois state court system, with the defendant eventually acquitted of all charges by a jury.

²⁰⁶ Of course, individually trivial discharges, if repeated by enough people over time, may be quite harmful collectively. The point here is not that such discharges ought to go unregulated, but, rather, that *de minimis* discharges, if subject to *criminal* enforcement, should not be regarded as seriously culpable acts in and of themselves.

unsightly blemish. A thimbleful of any chemical, dumped into public water supplies, might provoke widespread anxiety well out of proportion to the actual risk of harm. Yet, once again, there is nothing in the environmental statutes that *requires* such forms of harm as a basis for liability. In short, environmental law criminalizes much conduct that threatens little substantial harm, and is hence no more than minimally culpable.²⁰⁷

2. *Dangerousness*

Given a threat of harm, dangerousness refers to the likelihood that the defendant's conduct will produce that harm.²⁰⁸ At the margins, the dangerousness calculus bleeds into the harm calculus. For example, we might view dumping a thimbleful of acid into the middle of the ocean as only minimally culpable either because it threatens no substantial harm, or because the risk of serious injury would be viewed as extraordinarily remote by reasonable people. Thus, the sorts of minimal-harm environmental offenses described in the previous Section, where the harm threatened seems especially abstract and speculative, might also be thought of as minimal-danger offenses.

There may be other categories of offenses, though, that do threaten concrete and compelling harms, but that are nonetheless low on the culpability scale because the threat cannot reasonably be viewed as imminent. Imagine, for instance, that, without a required permit, a defendant stored a large volume of a toxic waste that was capable of producing an environmental catastrophe, but that harm was highly unlikely to occur because multiple elaborate back-up systems were in place to contain any spills or leaks.

In *United States v. Dillon*,²⁰⁹ the defendant argued that similar low-danger circumstances were present. In connection with his waste handling business, Dillon accumulated about 4000 drums in a warehouse.²¹⁰ Of these, sixty contained ignitable materials, and were hence classified as

²⁰⁷ Survey data bear out the view that, for purposes of determining just punishment in environmental cases, the public is sensitive to differences in the nature of the harm threatened or caused. For instance, survey respondents would impose stricter sentences in cases in which thousands of fish were killed (versus no fish killed), streams were polluted (versus no pollution), animal and plant habitat was destroyed (versus no habitat destruction), the incidence of respiratory illness increased (versus no increase), house paint and auto finishes were damaged by air pollution (versus no damage), and foul smells were caused by air pollution (versus no smells). ROSSI & BERK, *supra* note 156, at 121-26.

²⁰⁸ GROSS, *supra* note 84, at 79.

²⁰⁹ 351 F.3d 1315 (10th Cir. 2003).

²¹⁰ *Id.* at 1316.

“hazardous” under RCRA.²¹¹ Dillon was thus convicted of operating a facility for the treatment, storage, or disposal of hazardous wastes without a RCRA permit.²¹² At sentencing, Dillon “testified that, despite the lack of a permit, [his] facility was equipped with all of the necessary safety equipment and warning signs and that the employees were properly trained and outfitted.”²¹³ The sentencing judge nonetheless increased Dillon’s sentence because he had “created a risk of serious injury to others, [including his] employees, innocent neighbors, firefighters and other rescue workers because of the possibility of a fire or explosion.”²¹⁴ The judge did not, however, specifically address Dillon’s contention that these terrible harms were actually unlikely to occur.²¹⁵ In effect, the judge seems to have conflated dangerousness with harm. If Dillon’s (admittedly self-serving) testimony were credited, then he might plausibly claim that the dangerousness (and hence culpability) of his conduct was minimal: sixty flammable drums were surrounded by 3,940 safe drums, in a facility that was adequately prepared to respond in the unlikely event of a fire. The fact that these considerations were not relevant to his liability suggests how environmental laws may criminalize conduct that is only marginally dangerous.

3. Intent

The intent dimension turns on the defendant’s state of mind, using familiar *mens rea* concepts from the Model Penal Code.²¹⁶ The major environmental statutes typically criminalize “knowing” violations.²¹⁷ This language, however, suffers an ambiguity that has troubled many courts and

²¹¹ *Id.* at 1316-17. There is no indication that the material in the barrels possessed additional hazardous characteristics, such as toxicity.

²¹² *Id.* at 1317.

²¹³ *Id.*

²¹⁴ *Id.* (internal quotations marks omitted).

²¹⁵ *Id.* at 1318.

²¹⁶ GROSS, *supra* note 84, at 87.

²¹⁷ See *supra* Part I.B. While the most important to our analysis, “knowing” violations are not the only type of environmental crime. For instance, the Refuse Act of 1899 imposes strictly criminal liability for discharges into waterways; i.e., the statute has no *mens rea* requirement. Hanson, *supra* note 4, at 753-54. However, the Act is comparatively unimportant because the liability is only of the misdemeanor variety. *Id.* At the other end of the spectrum, some statutes increase sanctions upon proof that the defendant not only knowingly violated the law, but also knowingly “places another person in imminent danger of death or serious bodily injury.” Clean Air Act, 42 U.S.C. § 7413(c)(5)(A) (1977); see also Clean Water Act, 33 U.S.C. § 1319(c)(3) (2000); RCRA, 42 U.S.C. § 6928(e) (1986). Convictions under such “knowing endangerment” statutes seem comparatively rare. Barker, *supra* note 4, at 1403.

commentators: the language may be read to demand proof that the defendant knew that a particular legal requirement was violated (the "specific intent" interpretation)²¹⁸ or, alternatively, the language may be read merely to require that the defendant knew what his or her actions were, without necessarily understanding their legal significance (the "general intent" interpretation).²¹⁹ Despite much criticism, federal appellate courts have adopted the general intent approach with near uniformity.²²⁰

If "knowing" refers to facts, and not to the law, then a new ambiguity becomes apparent: must a defendant know *all* of the facts necessary to establish a violation of an environmental requirement, which may include many arcane and technically complicated facts, or may criminal liability be based on proof of some more limited factual knowledge?²²¹ For instance, whether a substance is considered a "hazardous waste" under RCRA may depend on the precise manufacturing process that produced the substance.²²² When the government prosecutes a truck driver for illegal disposal of a hazardous waste, must the government prove that the truck driver knew any specifics about how the waste was generated? The courts have generally held such technical knowledge to be unnecessary.²²³ Instead, the government generally need only show that the defendant had enough facts to alert him or her to the possibility that he or she was engaging in a regulated activity.²²⁴ For instance, in a RCRA prosecution,

²¹⁸ For a leading statement of this position, see *United States v. Weitzenhoff*, 35 F.3d 1275, 1293-99 (9th Cir. 1994) (Kleinfeld, J., dissenting from order rejecting suggestion for rehearing en banc).

²¹⁹ For a leading statement of this position, see *id.* at 1283-86.

²²⁰ See, e.g., *United States v. Wilson*, 133 F.3d 251 (4th Cir. 1998); *United States v. Sinskey*, 119 F.3d 712 (8th Cir. 1997); *United States v. Hopkins*, 53 F.3d 539 (2d Cir. 1995); *Weitzenhoff*, 35 F.3d at 1283. But see *United States v. Ahmad*, 101 F.3d 386, 391 (5th Cir. 1996) (suggesting that Clean Water Act violations do not fall within the scope of the doctrine permitting *mens rea* requirements to be relaxed for "public welfare offenses"); *United States v. Johnson & Towers, Inc.*, 741 F.2d 662, 668 (3d Cir. 1984), *cert. denied*, 469 U.S. 1208 (1985) (holding that RCRA prosecution for handling hazardous waste without a permit required proof that defendant knew a permit was required). For an argument that the discussion of public welfare offenses in *Ahmad* was dicta, see Hanson, *supra* note 4, at 761-62.

²²¹ See Lazarus, *Integration*, *supra* note 4, at 2471-73 (discussing required extent of defendant's factual knowledge).

²²² Garrett, *supra* note 33, at 3.

²²³ Lazarus, *Integration*, *supra* note 4, at 2472.

²²⁴ *Id.* For a critique of the cases, see *id.* at 2476-84. For an example of a criminal prosecution undertaken notwithstanding the defendant's claim of mistake of fact, see John D. Copeland, *The Criminalization of Environmental Law: Implications for Agriculture*, 48 OKLA. L. REV. 237, 239 (1995) (describing case against farmer who, by his account, thought

the government must show that the defendant knew that “what he [was] doing . . . [had] the potential for harm to others or the environment.”²²⁵ Put differently, the defendant may be held liable so long as he or she knew that the substance being handled “was not a harmless substance like uncontaminated water.”²²⁶

This standard shows how an environmental defendant may be convicted notwithstanding minimal culpability along the intent dimension.²²⁷ Recall that intent turns on the defendant’s knowledge regarding the dangers created by the defendant’s conduct. While “knowing” environmental crimes require knowledge by the defendant that his or her conduct is potentially harmful, this minimal *mens rea* element does not require that the defendant know the potential harm is either severe or *likely* to occur, or that the defendant has knowingly failed to undertake

he was discharging clean water from lagoon into stream, which may have caused death of 170,000 fish).

²²⁵ *United States v. Baytank (Houston), Inc.*, 934 F.2d 599, 613 (5th Cir. 1991). Courts are split as to whether the government must also show that the RCRA defendant knew the permit status of the relevant waste-handling facility, i.e., whether or not the facility had a permit. *Compare id.* (requiring knowledge of permit status), *with United States v. Laughlin*, 10 F.3d 961, 965-66 (2d Cir. 1993) (requiring no knowledge of permit status).

²²⁶ *Laughlin*, 10 F.3d at 965-66 (holding that jury instructions containing this language were proper); *see also United States v. Goldsmith*, 978 F.2d 643, 645 (11th Cir. 1992) (*per curiam*) (upholding jury instruction on knowledge element that “defendant knew that the material had the potential to be harmful to others or to the environment, in other words, that it was not an innocuous substance like water”); *United States v. Sellers*, 926 F.2d 410, 417 (5th Cir. 1991) (“There is no requirement that the defendant must know that the waste would be harmful if improperly disposed of.”) (internal quotation marks omitted); *United States v. Dee*, 912 F.2d 741, 745-46 (4th Cir. 1990) (upholding jury instruction requiring that jury find materials were “chemicals” but not necessarily hazardous), *cert. denied*, 499 U.S. 919 (1991); *United States v. Hoflin*, 880 F.2d 1033, 1039 (9th Cir. 1989) (holding defendant must know “that the chemical wastes had the potential to be harmful to others or to the environment, or in other words, it was not an innocuous substance like water”), *cert. denied*, 493 U.S. 1083 (1990). ²²⁷ For an argument that the leading appellate cases establishing these minimal intent requirements were instances “in which an appellate court got lured into a bad statement of the law because it wanted to avoid a meaningless retrial,” *see DELONG, supra* note 116, at 27. Moreover, these appellate decisions may cut against the grain of the Supreme Court’s recent pattern of interpreting criminal statutes to require a sufficiently high *mens rea* so as “to protect the morally innocent if the sentencing guidelines would likely require imprisonment upon conviction.” *See Kennedy, supra* note 89, at 754 (describing pattern).

precautions to reduce the risk. In Gross's schema, negligence describes the lowest level of culpable intent: "doing intentionally what bears a *significant risk* of . . . harm *in the absence of adequate care and precaution.*"²²⁸ Yet, the environmental criminal law does not require even this level of intent.²²⁹ As Lazarus put it, "liability for knowing violations could be fairly dubbed mostly strict (if such a characterization is not an oxymoron)."²³⁰

²²⁸ GROSS, *supra* note 84, at 87 (emphasis added).

²²⁹ Indeed, the *mens rea* requirements may be even more relaxed than what has been suggested thus far. Under the "responsible corporate officer" doctrine, a corporate official in a highly regulated industry may be held criminally liable for a regulatory violation merely upon a showing that he had "by reason of his position in the corporation, responsibility and authority either to prevent in the first instance, or promptly to correct, the violation complained of, and that he failed to do so." *United States v. Park*, 421 U.S. 658, 673-74 (1975). Some courts have suggested that the doctrine ought to be applied to environmental crimes such that a subordinate's mental state could be imputed to a responsible corporate officer. *See, e.g., United States v. Brittain*, 931 F.2d 1413, 1419 (10th Cir. 1991) (indicating "willfulness or negligence" might be imputed to responsible corporate officer in CWA prosecution "by virtue of his position of responsibility"); *cf. United States v. Johnson & Towers, Inc.*, 741 F.2d 662, 669-70 (3rd Cir. 1984) (indicating, in RCRA prosecution, that required knowledge on the part of corporate officer defendants might be inferred on the basis of their positions). This is a controversial proposition, however, and the courts have been inconsistent in their reliance on the responsible corporate officer doctrine in the environmental context. For a discussion and critique of the cases, see Dore & Ramsay, *supra* note 4, at 186-97; Cynthia H. Finn, Comment, *The Responsible Corporate Officer, Criminal Liability, and Mens Rea: Limitations on the RCO Doctrine*, 46 AM. U. L. REV. 543, 562-69 (1996); Lisa Ann Harig, Note, *Ignorance Is Not Bliss: Responsible Corporate Officers Convicted of Environmental Crimes and the Federal Sentencing Guidelines*, 42 DUKE L.J. 145, 151-56 (1992).

²³⁰ Lazarus, *Integration*, *supra* note 4, at 2472. These "strict liability" features of environmental criminal law have attracted the most critical comment. However, Professor Simons has argued persuasively that, in order to appreciate the extent to which a statute criminalizes nonculpable conduct, we must not focus exclusively on the presence or absence of particular *mens rea* requirements. Simons, *supra* note 88, at 1090-91. This is because the legislature may easily transform a strict liability statute into a statute that has a *formal* culpability element, but that has much the same *substantive* effect. For example, a statute that holds people strictly liable for causing a forest fire may be transformed into a statute that criminalizes knowingly lighting a match. *Id.* at 1090. Thus, Simons invites us to consider not only *mens rea*, but the full substantive scope of a criminal statute, which is what has been attempted in the prior Sections of this Part. The exclusive focus on the word "knowingly" in the environmental criminal statutes has led some defenders of the statutes to conclude that they criminalize only culpable conduct. *See, e.g., Brickey, Rhetoric*, *supra* note 4, at 120-23. The claim is belied not only by the actual meaning of "knowingly" in the environmental context, as interpreted by the appellate courts, but also because the environmental statutes fit Simons's model of statutes that merely have a *formal* culpability element.

4. Legitimacy

In light of the fourth and final dimension of culpability, conduct that is intentional and dangerous may nonetheless fall outside the scope of what is blameworthy, so long as it otherwise has legitimacy.²³¹ This dimension turns on the presence of a legitimate interest served by the defendant's conduct.²³² When weighed against the harm that is done or threatened by the defendant, the legitimate interest may mitigate the defendant's culpability.²³³ The interests upon which a defendant may rely are considered first below, followed by a discussion of the interest-balancing analysis.

a. Interests Served by Defendant's Conduct

Environmental defendants may invoke any of a range of potentially legitimate interests. For instance, they may have a legitimate interest in acting in conformity with a mistaken understanding of the law, at least if the mistake is justifiable.²³⁴ In light of its complexity, environmental law raises uniquely compelling risks of mistake.²³⁵ Gross takes the position that mistake of law mitigates culpability,²³⁶ and this position has considerable

²³¹ GROSS, *supra* note 84, at 80-81.

²³² *Id.* at 80.

²³³ *Id.* at 80-81. Canadian law, unlike American, has recognized this principle in the environmental context; criminal liability is based on the existence of "substantial harm to the environment without any overriding social justification." Mueller, *supra* note 24, at 9.

²³⁴ Mistake of fact might also bear on the culpability analysis to the extent that it affects the intent dimension. For instance, if a defendant illegally discharged a toxic liquid, reasonably believing it to be harmless water, then culpability along the intent dimension might be lacking.

²³⁵ To say that some environmental violators may misunderstand the requirements of the law is not, of course, to claim that all environmental requirements are uncertain or that all violators are merely confused. Some sectors of the hazardous waste hauling business (so-called "sludge-runners"), for instance, have been notorious for midnight dumping and other unscrupulous practices that are plainly intended to circumvent RCRA. Epstein, *supra* note 91, at 156.

²³⁶ Gross suggests that defendants may justifiably rely on the "best authoritative opinion" then available. GROSS, *supra* note 84, at 173. In the environmental context, this might permit reliance on any of a range of sources, including agency guidance documents, judicial and administrative decisions in similar cases, and explicit instructions to the defendant by regulatory officials. Indeed, the environmental context may present unique difficulties because there are so many different potential sources of authoritative opinion: what happens when the "authorities" do not speak with one voice? For instance, federal regulators might interpret the law one way, while state regulators may interpret the law differently. Or officials in the field may interpret the law differently in their communications with polluters than do central authorities in official guidance documents. Where polluters receive mixed messages, claims of justifiable reliance on one opinion are properly greeted with skepticism. In particular, when one authoritative source *permits* (but does not require) what another

intuitive appeal.²³⁷ Otherwise, we would view as equally blameworthy the defendant who blatantly violated a crystal-clear regulation and the defendant who violated an opaque regulation after making reasonable, good-faith efforts to discern its meaning. To be sure, as every first-year law student knows, "ignorance of the law is no excuse." Yet, there is a real difference between ignorance of a law whose existence and meaning may reasonably be ascertained and ignorance of a law that is as profoundly complex and obscure as are some environmental regulations.²³⁸ Moreover, at present, we are only considering whether there is a *legitimate interest* in acting based on a misunderstanding of the law; whether such an interest actually mitigates culpability requires a weighing of other considerations.

Additionally, a defendant may have a legitimate interest in the use and enjoyment of his or her own property. Indeed, the criminal law traditionally shows considerable respect for property rights and recognizes a defendant's property interests. Thus, a defendant's otherwise unlawful use of force may in some circumstances be justified (and liability avoided)

equally authoritative source *prohibits*, it does not seem unreasonable to conclude that the polluter proceeds at his or her own peril.

²³⁷ Henry Hart put the matter this way:

All statutes are, of necessity, indeterminate in some of their applications. When a criminal enactment proscribes conduct which is *malum in se*, such as murder or manslaughter, however, the moral standards of community are available always as a guide in the resolution of its indeterminacies, and there is a minimum of unfairness when doubt is resolved against a particular defendant. This guidance is missing when the proscribed conduct is merely *malum prohibitum*. The resolution of doubts must, thus, depend not upon a good human sense of moral values, but upon a sound grasp of technical doctrines and policies of statutory interpretation. . . . To condemn a layman as blameworthy for a default of technical judgment in a matter which causes trouble even for professional judges is, in many cases . . . manifestly beyond reason. . . .

Henry A. Hart, Jr., *The Aims of the Criminal Law*, in CORPORATE AND WHITE-COLLAR CRIME: AN ANTHOLOGY 1, 7 (Leonard Orland ed., 1995); see also John Shepard Wiley Jr., *Not Guilty by Reason of Blamelessness: Culpability in Federal Criminal Interpretation*, 85 VA. L. REV. 1021, 1028-29 (1999) (arguing that moral culpability is based on violating either a moral norm as to which there is a strong community consensus or a law that the violator knew or should have known about).

²³⁸ See Vitiello, *supra* note 5, at 247 ("[C]ommentators and some courts have long recognized that the claim that ignorance of the law is no excuse is overstated."). In the environmental context, the difficulties of the law may be exacerbated by inconsistent enforcement policies. Perhaps the most notable example in recent years arose from the New Source Review program under the CAA, which mandates new, more stringent pollution control equipment when air pollution sources undergo "modifications." 42 U.S.C. § 7411(a)(2) (1978). Unfortunately, the line between "major modification" and "routine maintenance" has never been drawn with particular clarity. See *Wis. Elec. Power Co. v. Reilly*, 893 F.2d 901, 909 (7th Cir. 1990). Nonetheless, after years of accommodating industry, EPA launched numerous high-profile enforcement actions for NSR violations in 1999, prompting criticism that EPA had effectively changed its interpretation of the law without fair warning. DELONG, *supra* note 116, at 46-47.

when the defendant was protecting his or her property from a burglar.²³⁹ While not all such uses of force are justified *per se*, the underlying interest is legitimate and sufficiently strong to trigger a case-by-case weighing of the victim's and defendant's interests in light of all the circumstances.²⁴⁰

Environmental cases often involve an allegedly unlawful use by the defendant of his or her own property. In *Dillon*, for instance, the defendant was convicted of using his property illegally to store hazardous wastes. Such defendants, however, have a legitimate interest in the use of their property as they see fit. To recognize this interest is not necessarily to excuse uses that are injurious to others,²⁴¹ just as a property owner's interest does not necessarily justify the use of deadly force against a burglar. But recognizing the interest does potentially mitigate the defendant's culpability, at least where the countervailing interests are relatively slight.

Finally, a defendant may assert a right to do nothing. Such an interest might come into play in cases involving crimes of omission, rather than commission, as with failures to comply with any of the copious record-keeping and reporting requirements in environmental law.²⁴² Criminal law has long recognized a distinction between malfeasance and nonfeasance, traditionally exhibiting a reluctance (albeit not a *per se* refusal) to punish mere omissions.²⁴³ In light of this tendency, a defendant who has

²³⁹ GROSS, *supra* note 84, at 182.

²⁴⁰ *Id.* Public opinion also supports the view that people acting in defense of their property may appropriately be relieved of criminal liability for some of their acts. ROBINSON & DARLEY, *supra* note 139, at 71.

²⁴¹ See, e.g., Seis, *supra* note 23, at 268-71 (describing case of illegal disposal in which manufacturer dumped barrels of hazardous chemicals behind plant on company property; chemicals apparently leached into nearby lake, killing "scores of fish").

²⁴² Additionally, environmental laws may be violated passively by failing to undertake required precautionary measures. Professor Cohen offers an illustrative prosecution:

[T]hree corporate officers working at the Philadelphia headquarters of Pennwalt Corporation were indicted in 1988 following an accidental tank rupture and chemical spill at Pennwalt's plant in Tacoma, Washington. Although the charges were later dropped, the government prosecutor observed that "the nature of the charge was somewhat novel, in the sense that we were charging corporate officers for passive negligence as distinguished from active negligence—they failed to take a proactive role in establishing preventative maintenance plans for their facilities adequate to protect against this kind of situation."

Cohen, *Theory*, *supra* note 6, at 1069-70.

²⁴³ See, e.g., ROBINSON & DARLEY, *supra* note 139, at 42 ("Anglo-American law has generally resisted imposing liability for a person's failure to act to help a stranger in distress."). Public opinion also seems to distinguish between malfeasance and nonfeasance. *Id.* at 48.

performed no *act* that violates the law may rely on an interest in simply being left alone.²⁴⁴

b. Weighing the Interests

In order to understand whether such interests materially diminish a defendant's culpability, the interests must be considered in context: do the interests served by the defendant's conduct, objectively considered, outweigh the interests harmed or threatened by that conduct?²⁴⁵ Some environmental crimes involve quite minimal harms, e.g., the pure paperwork violation or the discharge of trivial quantities of a regulated substance without a required permit. In such cases, if the defendant could assert any legitimate interest, we might readily conclude that the defendant was only minimally culpable. The harder question is whether a defendant's interests might serve to mitigate culpability in cases implicating more substantial harms.

In Gross's schema, harmful conduct may never be justified by countervailing interests when "a reasonable alternative was plainly available to the actor so that harm could be avoided . . ." ²⁴⁶ The difficulty, of course, lies in knowing what is "reasonable." Consider a factory that discharges a particular waste stream into an adjacent river, where it harms various aquatic organisms. In reliance on a justifiable misunderstanding of the law, the factory owner chooses not to treat the waste to remove its harmful qualities before it is discharged. If it turned out that the cost of treatment (and hence avoiding harm) was trivial, the factory owner might properly be regarded as culpable without regard to any further weighing of the interests. By the same token, if the cost of treatment was ruinous, we might conclude that the alternative was unreasonable, and the mistake of law would more likely be considered mitigating. In between trivial and ruinous expense, though, the culpability analysis would be much less clear.

²⁴⁴ GROSS, *supra* note 84, at 170. Gross notes other senses in which the absence of an act may mitigate culpability. For instance, if there was no act, then the intent dimension of culpability (which requires an intentional act) is absent. *Id.* at 167; *see also* Thompson, *supra* note 122, at 54-56 (arguing that criminally enforceable reporting statutes may infringe upon legally recognized liberty interests).

²⁴⁵ GROSS, *supra* note 84, at 176-77.

²⁴⁶ *Id.* at 177-78. Gross's views on this point, emphasizing a consideration of alternative courses of conduct, resonates with an important strand of risk assessment theory that has developed outside the criminal context. According to this view, "[t]here is no such thing as an acceptable risk. Rather, there are only acceptable *options* involving risks. The choice or decision of how to act is heavily dependent on what the alternatives are, as well as being dependent on evaluation of hazards and benefits." JENNY STEELE, *RISKS AND LEGAL THEORY* 172 (2004).

Assuming the existence of at least some cases in which the defendant lacked a reasonable alternative to avoid the harm, when would countervailing legitimate interests justify the harm and mitigate culpability? The question probably lacks any clear, categorical answer. Indeed, there may be few cases that would produce any real social consensus, as the question implicates highly charged political questions relating to the value of private property rights, animal rights, ecological integrity, and so forth.²⁴⁷ While acknowledging the vexed nature of the question, some circumstances may be identified in which the case for mitigated culpability would be especially strong. For instance, when the *type* of harm at issue is relatively less severe (e.g., injury to property, as opposed to personal injury), or the *risk* of that harm coming about relatively low, then countervailing interests are more likely to predominate.²⁴⁸ Likewise, when the “victim” has provided informed consent to the threatened harm, the harm might weigh relatively less in the scales.²⁴⁹ For instance, if the defendant herself illegally removed asbestos without using proper safety equipment, she might be regarded as less culpable than a defendant who ordered unsuspecting, uneducated employees to do the same task.²⁵⁰ Finally, when the defendant’s activities have some special, well-recognized public value (like operating a sewage treatment plant), then culpability also might be mitigated.²⁵¹

²⁴⁷ See, e.g., Sussman, *supra* note 200, at 577 (noting that “key constituencies often disagree violently about whether many environmental problems are real”).

²⁴⁸ In the mistake-of-law context, this view finds support in Henry Hart’s proposed distinction between *malum in se* and *malum prohibitum*, i.e., that mistake of law is less likely to be excusable when the wrongness of the defendant’s conduct should be clear on its face. See *supra* note 237.

²⁴⁹ GROSS, *supra* note 84, at 185. Gross notes two crucial qualifications on consent as a mitigating factor: (1) the victim must be competent to consent; and (2) consent is not effective as to serious harms that are not privileged by social acceptance. *Id.* at 185-86. In the latter circumstance, Gross would reject consent insofar as the defendant’s conduct exceeds the socially accepted bounds of decency or inflicts costs on non-consenting third-parties (e.g., family members of the “consenting” victim). *Id.* at 186.

²⁵⁰ See, e.g., *United States v. Chau*, 293 F.3d 96, 99 (3d Cir. 2002) (describing unsafe asbestos-stripping activities conducted by the defendant himself without assistance).

²⁵¹ The dissenters in *United States v. Weitzenhoff* made this point regarding the culpability of sewage workers for CWA violations:

Provision for sanitary sewage is among the most ancient laws of civilization. Sewage workers perform essential work of great social value. Probably nothing has prevented more infant mortality, or freed more people from cholera, hepatitis, typhoid fever, and other disease, than the development in the last two centuries of municipal sewer systems.

35 F.3d 1275, 1299 (9th Cir. 1993) (Kleinfeld, J., dissenting) (internal citations omitted).

5. Summary

The environmental statutes criminalize conduct that seems only minimally culpable, either because it threatens no significant harm, or because the risk of the threatened harm is insubstantial, or because the defendant lacks a culpable state of mind with respect to the danger, or because the defendant's conduct (though dangerous) is justified in light of other considerations (e.g., a mistake of law). This is not to say, of course, that all environmental offenders are minimally culpable.²⁵² Rather, the point here is that environmental law criminalizes conduct representing an unusually wide range of culpability. As one commentator notes, criminal environmental violations

can arise from many combinations of circumstances including, for example: (1) broken pipes in facilities that are old or new and above or below ground; (2) leaking tanks that are old or new and above or below ground; (3) operator error; (4) pollution control equipment that is adequate but broken or inadequately maintained; (5) pollution control equipment that is inadequate; or (6) breakdowns of equipment that lead to surges through pollution control equipment. The violations can arise in facilities with good, bad, or indifferent training of employees. The violations can occur in the same facility once, less than 1% of the time, or more frequently. The violations can pose a risk of harm to the environment or no risk of harm. The violations may have been recognized and ignored or recognized and corrected promptly or slowly, and budget requests to correct the violations may have been accepted, deferred, or rejected.²⁵³

Yet, from the standpoint of the formal requirements for liability, none of these distinctions matter. Indeed, one veteran environmental attorney advises that the legal standards for environmental criminal liability are so low that a defendant's best hope at trial is often to seek jury nullification.²⁵⁴

III. THE DEBATE OVER CULPABILITY STANDARDS

Observing the possibility of conviction for low-culpability conduct, a number of commentators have expressed concern over the broad scope of environmental criminal liability. This Part describes the critique and then the response that has been offered by defenders of the current state of the

²⁵² For instance, some particularly unsavory environmental offenders are described in Carter, *supra* note 166, at 174-77.

²⁵³ Kenneth Berlin, *Criminal Liability of Corporate Officers, Directors, and Employees Under U.S. Environmental Laws*, in ENVIRONMENTAL CRIMINAL LIABILITY: AVOIDING AND DEFENDING ENFORCEMENT ACTIONS 112, 115 (Donald A. Carr ed., 1995).

²⁵⁴ Scott N. Fein, *Dealing With the Prosecution*, in ENVIRONMENTAL CRIMINAL LIABILITY: AVOIDING AND DEFENDING ENFORCEMENT ACTIONS 99, 104 (Donald A. Carr ed., 1995).

law. Finally, this Part evaluates the debate and suggests greater attention to sentencing law as a mechanism to address criticisms of substantive law.

A. THE CRITIQUE OF ENVIRONMENTAL CRIMINAL LAW

A leading academic critic of environmental criminal law, Professor Lazarus has argued that the low culpability standards result in a number of costs. For instance, low culpability standards may diminish the moral force of criminal law:

Criminal law possesses moral force because of its close adherence to traditional criteria of moral culpability, especially the *mens rea* element of the offense. It is not enough, therefore, that the environmental concerns safeguarded by environmental protection standards clearly fall within those kinds of interests warranting the protection of criminal sanctions. Nor are environmental criminal penalty provisions justified simply because many violators of criminal standards are indistinguishable in motive and intent from those committing more traditional crimes condemned by society. These important general truisms are not a substitute for proof that an individual defendant possesses the level of culpability necessary to justify one of society's harshest sanctions: felony incarceration. Environmental law cannot have it both ways. It cannot seek to exploit criminal law's moral force, while abandoning those elements, like *mens rea*, upon which the legitimacy of that moral force ultimately rests.²⁵⁵

Lazarus's argument on this point complements the more general utilitarian defense of proportionality advanced by Robinson and Darley: a criminal justice system that punishes more harshly than is justified by community views of culpability risks losing its moral credibility, and hence its ability to shape norms of good conduct.²⁵⁶

Moreover, Lazarus proceeds, even if we assume that prosecutors will choose not to prosecute the morally innocent, the broad definition of criminal liability demoralizes the innocents who are subject to prosecution:

[M]any individuals must live in fear of possible criminal prosecution and depend on governmental goodwill to maintain their freedom. . . . The demoralization problem is especially acute when environmental pollution is the basis of the underlying offense

²⁵⁵ Lazarus, *Integration*, *supra* note 4, at 2486. Here, Lazarus echoes a similar argument made by Francis Sayre in his seminal work on public welfare offenses. See Francis Bowes Sayre, *Public Welfare Offenses*, 33 COLUM. L. REV. 55, 79-80 (1933). For another influential statement of the point outside the environmental context, see Coffee, *supra* note 131, at 53.

²⁵⁶ See *supra* Part II.B.1. As Professor Kahan points out, such a system of disproportionate punishment may not even be enforceable. Dan M. Kahan, *Gentle Nudges vs. Sticky Norms: Solving the Sticky Norms Problem*, 67 U. CHI. L. REV. 607, 608 (2000); see also *infra* Part VI.B.2.

because many legitimate, unavoidable activities are among those subject to possible prosecution.²⁵⁷

Additional concerns might be added to those identified by Lazarus. For instance, there is the threat of "overdeterrence," i.e., that given the difficulty of avoiding environmental violations, and, hence, criminal liability, companies will discontinue productive activities that society does not really wish to prohibit. Professor Cohen makes the point this way:

[C]onsider the case of oil spills. If the price of causing an oil spill is increased so high that firms do not engage in the shipping of oil, society is adversely affected. Further, it would not be advantageous for oil tankers to spend more than a socially desirable amount of their resources trying to ensure that adequate oil spill prevention safeguards exist. Finally, we do not want firms to spend an inordinate amount of their time and energy making sure they are not falsely accused of committing a crime.²⁵⁸

Finally, there is the problem of misdirection of scarce criminal justice resources. Due to limitations on investigative, prosecutorial, judicial, and penal resources, only a small proportion of crimes can be prosecuted and

²⁵⁷ Lazarus, *Integration*, *supra* note 4, at 2487-88. Henry Hart made a similar point about prosecutorial discretion and regulatory crime more generally, criticizing the "arrogant assertion that it is proper to visit the moral condemnation of the community upon one of its members on the basis solely of the private judgment of his prosecutors." Hart, *supra* note 237, at 9; *see also* Wiley, *supra* note 237, at 1065-67 (arguing against giving prosecutors unreviewable discretion to punish morally innocent).

Lazarus has identified an additional concern that has perhaps lost some of its timeliness: he argues that relaxed culpability standards have provoked a "pathological cycle of controversy" between Congress and the Executive Branch. Lazarus, *Integration*, *supra* note 4, at 2489. By defining liability as broadly as it has, Congress has effectively granted vast prosecutorial discretion to the Executive Branch. Since only a tiny fraction of environmental crimes can possibly be prosecuted, the Executive Branch must pick and choose among violations for criminal sanctions. But, in return for this grant of broad delegated authority, Congress has attempted to retain an unusually robust supervisory role. As a result, legislators have frequently criticized decisions to prosecute or not prosecute particular environmental cases. *Id.* at 2410, 2490-91. Prosecutors, for their part, have decried what they perceive as a politicization of law enforcement. *Id.* at 2492. Yet, while such controversy received considerable publicity in the early and mid-1990s, the disputes seem to have abated in recent years. This may reflect maturation of the environmental prosecution program, as legislative and executive officials have learned better how to work constructively with one another. Or, it may reflect the fact that a single political party now controls both branches.

²⁵⁸ Cohen, *supra* note 23, at 232; *see also* DELONG, *supra* note 116, at 23 ("By subjecting businesses and their officers to heavy penalties even for minor violations, including those that do not cause or even threaten a release of pollutants, the agency does indeed ensure that businesses will devote huge sums to preventing violations. These results are not necessarily positive.").

sanctioned.²⁵⁹ The prosecution of low-culpability defendants may diminish the number and effectiveness of cases brought against high-culpability defendants, thereby potentially producing odd disparities in the criminal justice system: the marginally blameworthy are sanctioned, while the greatly blameworthy may walk free. Through legislative history, Congress has indicated a desire that prosecutors not pursue environmental violations that are merely technical in nature.²⁶⁰ The low culpability requirements in the statutes, however, make such prosecutions a distinct possibility.²⁶¹ Indeed, the substantive law sends a signal to prosecutors regarding legislative preferences that undercuts what is indicated by the legislative history.²⁶² Moreover, while formal environmental prosecution guidelines suggest that prosecutors should take culpability into account when deciding which cases to pursue, there is good reason to believe that prosecutors do sometimes prosecute low-culpability cases.²⁶³

In light of such concerns, several commentators have proposed reforms.²⁶⁴ Lazarus, for instance, proposes a mistake of law affirmative defense.²⁶⁵ The defendant would have the burden of proving both that a mistake was made and that the mistake was objectively reasonable.²⁶⁶ Additionally, Lazarus proposes that, in general, the government should be required to prove the defendant's knowledge of *all* legally relevant facts.²⁶⁷

B. THE DEFENSE OF CURRENT CULPABILITY STANDARDS

Professor Brickey has offered the most spirited defense of the current state of the law.²⁶⁸ In essence, Brickey argues that prosecutors can be

²⁵⁹ See, e.g., Michael Edmund O'Neill, *When Prosecutors Don't: Trends in Federal Prosecutorial Declinations*, 79 NOTRE DAME L. REV. 221, 271 (2003) ("[F]ederal prosecutors decline roughly a quarter of all criminal matters referred to them.").

²⁶⁰ Copeland, *supra* note 224, at 265; Vitiello, *supra* note 5, at 229-30, 234.

²⁶¹ Low culpability requirements may also dilute Fourth Amendment protections against unreasonable searches and seizures, because probable cause is easier to show where the underlying crime is itself easier to prove. Barker, *supra* note 4, at 1419-20.

²⁶² See Wiley, *supra* note 237, at 1067 ("If Congress writes vague and encompassing federal crimes, it is likely to get vague and encompassing federal prosecutions.").

²⁶³ See *infra* Parts III.C.2, IV.D.

²⁶⁴ See, e.g., Hanson, *supra* note 4, at 764-67; Lazarus, *Integration*, *supra* note 4, at 2513-15; Spence, *supra* note 4, at 985.

²⁶⁵ Lazarus, *Integration*, *supra* note 4, at 2513.

²⁶⁶ *Id.* at 2514. Lazarus envisions the defense as a defense to incarceration only. *Id.*

²⁶⁷ *Id.*

²⁶⁸ See generally Brickey, *Charging Practices*, *supra* note 4; Brickey, *Rhetoric*, *supra* note 4. While the most prominent defender of the status quo, Brickey is by no means alone among commentators in taking this position. See, e.g., Andrew J. Turner, *Mens Rea in*

trusted: they will ensure that criminal sanctions are reserved for only the truly culpable defendants.²⁶⁹ Relying on empirical data on actual charging practices, Brickey accuses critics of making “speculative inferences about who is—or is likely to be—caught up in the criminal enforcement net and why.”²⁷⁰ In particular, Brickey has most recently analyzed 330 hazardous waste prosecutions from fiscal years 1983 through 1992.²⁷¹

Brickey highlights several aspects of the data. First, nearly two-thirds of the prosecutions were “multidimensional,” that is, they involved charges brought under more than one statute.²⁷² From this, Brickey concludes that most prosecutions “are based not on a single isolated act, like disposing a solvent-laden rag, but on a course of conduct that more often than not involves multiple violations of several criminal statutes.”²⁷³ She further notes that nearly half of the cases involved charges brought under non-environmental statutes in addition to the “pure” environmental charges.²⁷⁴ The most common “Title 18” charges were for conspiracy and making false statements, which “require proof of ‘conventional’ culpability.”²⁷⁵

The most common environmental charge was handling hazardous waste without a permit.²⁷⁶ According to Brickey:

That such a large percentage of RCRA prosecutions included “no permit” charges strongly suggests that prosecutors give high priority to pursuing what appear to be rogue operators.

. . . .

Prosecution of RCRA permit holders for violating the terms or conditions of a permit is exceedingly rare. . . . The data . . . suggest that prosecutors have exercised considerable restraint in deciding which RCRA permit violations merit criminal prosecution. Prosecutions that charge violations of the statutory permit requirements focus almost exclusively on those who operate outside the regulatory loop.²⁷⁷

In a majority of the cases, the government prosecuted multiple defendants.²⁷⁸ Moreover, most of the individual defendants were “business people who have substantial authority and responsibility,” such as

Environmental Crime Prosecutions: Ignorantia Juris and the White Collar Criminal, 23 COLUM. J. ENVTL. L. 217, 236 (1998).

²⁶⁹ Brickey, *Charging Practices*, *supra* note 4, at 1085.

²⁷⁰ *Id.* at 1084.

²⁷¹ *Id.* at 1095-96.

²⁷² *Id.* at 1110.

²⁷³ *Id.*

²⁷⁴ *Id.* at 1108.

²⁷⁵ *Id.* at 1112-13.

²⁷⁶ *Id.* at 1115.

²⁷⁷ *Id.* at 1118-20.

²⁷⁸ *Id.* at 1122.

responsibility for overall company operations or environmental compliance.²⁷⁹ Brickey finds this pattern significant:

These prosecutions are not about isolated events or inadvertent occurrences. They are about people who engaged in a common course of conduct that ran afoul of the law. . . . [M]any (and perhaps most) of these crimes occur during the ordinary course of business. The occupational status of individual defendants . . . serves to confirm this hypothesis.²⁸⁰

Most of the cases arose out of the activities of manufacturing or waste management businesses.²⁸¹ Brickey found little support for “concerns about prosecutors targeting neighborhood businesses like auto repair shops and dry cleaning establishments.”²⁸² While the data was more sketchy as to other offense characteristics, it is clear that many of the cases involved the disposal of hazardous wastes in and along waterways, or in remote or unattended locales.²⁸³ Finally, among the cases for which type of waste information was available, most seemed to involve hazardous chemical wastes.²⁸⁴

In light of the data, Brickey concludes that environmental criminal prosecutions “should hardly be cause for alarm”.²⁸⁵

Hazardous waste prosecutions focus almost exclusively on business people who have significant operational authority and responsibility. RCRA prosecutions target obviously illegal conduct that occurs in the context of highly regulated business activity. The violations are often pervasive and almost always potentially harmful to human health and the environment.²⁸⁶

C. EVALUATION OF THE LAZARUS-BRICKEY DEBATE

As Brickey suggests, the criticisms of environmental criminal law are indeed largely speculative and anecdotal (or, if a term with more positive connotations is desired, theoretical). The critique may indeed require a more complete picture of what really happens in the criminal justice system in order to be truly compelling. On the other hand, Brickey’s empirical approach does not itself fully refute the critique.

In commenting on the debate in this Section, I focus on Brickey’s study of charging practices; it is the most recent entry in the debate and has

²⁷⁹ *Id.* at 1127.

²⁸⁰ *Id.* at 1123.

²⁸¹ *Id.* at 1129.

²⁸² *Id.*

²⁸³ *Id.* at 1130.

²⁸⁴ *Id.* at 1132.

²⁸⁵ *Id.* at 1133-34.

²⁸⁶ *Id.* at 1134-35.

not yet received a sustained critical analysis in the academic literature. I first show that, even if Brickey's empirical claims are true, she has not fully rebutted Lazarus's arguments. Next, I suggest some reasons to question the persuasiveness of the empirical analysis. Finally, I discuss the value of focusing on environmental sentencing law and practice as a way to move the debate forward.

1. The Problem of Perceived Prosecutorial Abuse

Assume for the moment that Brickey is right: prosecutors leave low-culpability defendants alone and target the genuinely blameworthy. Even if true, this fact would not, by itself, fully address the criticisms of Lazarus and others, for the criticisms relate chiefly to *perceptions* of prosecutorial abuse. No matter how responsible prosecutors are in *practice*, if they are *perceived* to target the morally innocent, then the risks exist that the moral force of the criminal law will be diminished, the regulated community will be demoralized, and socially beneficial activities will be discontinued for fear of prosecution.

Normally, we might expect that perceptions about the legal system would more or less track reality, but there are actually basic structural reasons to suspect a systematic gap between perception and reality in this context. Criminal enforcement is, after all, an adversarial process, and criminal defendants are unlikely to admit to culpability. Nor, given the expansive scope of environmental criminal liability, can even a guilty plea be construed as an admission of substantial culpability. There would be no inconsistency, for instance, between a defendant pleading guilty to an environmental offense and simultaneously maintaining that the offense was based on a justifiable mistake of law; or amounted to no more than a minor, isolated incident; or was caused by a rogue employee acting without the defendant-employer's approval. Thus, as against the high-culpability story told by the government, there will typically be a low-culpability story told by the defendant.

Of course, defendants always have their own self-serving version of the facts, but there are particular reasons their versions may have credibility in the environmental context. First, as long as it is known that the environmental law criminalizes minimally culpable conduct, the story of the environmental defendants will have a basic plausibility lacking in other contexts. Second, environmental prosecutions must be understood in the broader setting of pervasive, adversarial interactions between environmental regulators and industry. The regulated community tends to view environmental agencies as unreasonable, unduly rigid, and prone to abuse

their power.²⁸⁷ In this setting, the regulated community is apt to view the high-culpability story told by government prosecutors with considerable skepticism.²⁸⁸ Finally, consider the targets of environmental prosecutions: if Brickey is right, they are large corporations and high-level managerial employees.²⁸⁹ Given their high social status, they likely possess a degree of credibility with the public that other sorts of defendants lack. Moreover, they also likely have the resources to hire capable lawyers and publicists, and to mount sophisticated public-relations campaigns to persuade the public that they have done nothing wrong. In short, it is far from clear that—whatever the reality of responsible prosecution—the regulated community (and perhaps the public at large) will ever be entirely confident that prosecution is indeed reserved for high-culpability violators.

2. Difficulties With the Empirical Claims

Brickey's work is a helpful starting point in shifting the environmental crimes debate from the speculative to the empirical, but only a starting point. There are several reasons to question the persuasiveness of her conclusions. First, the database is derived chiefly from documents providing the government's side of the story. The "core" of the database is EPA's case summaries.²⁹⁰ These do not necessarily reflect what was proven in court, or stipulated to by the defendant. Moreover, Brickey draws most of her conclusions from what was *charged* in the cases under review, which may be a long way from what the defendant was actually proven (or admitted) to have done. In our adversarial system, charging documents may put the worst gloss possible on the defendant's conduct.²⁹¹

²⁸⁷ See RECHTSCHAFFEN & MARKEL, *supra* note 72, at 81 (quoting politician comparing EPA to Gestapo); Sussman, *supra* note 200, at 576-77 (describing critical views of EPA). For an argument that such critical views are undeserved and that few EPA enforcers actually respond to violations with a rigid, legalistic approach, see *id.* at 81-83. For an argument that the conflict-ridden nature of the environmental regulatory process derives, in part, from the aspirational quality of environmental law, i.e., the law's tendency to promise more than it can deliver, see Dwyer, *supra* note 99, at 234.

²⁸⁸ Such skepticism may be enhanced to the extent that the threat of criminal enforcement is used by enforcement agencies to extract advantageous settlements in civil actions; such heavy-handed civil enforcement likely casts criminal enforcement into disrepute in the regulated community. Spence, *supra* note 4, at 989.

²⁸⁹ Brickey, *Charging Practices*, *supra* note 4, at 1127.

²⁹⁰ *Id.* at 1095.

²⁹¹ One critic of EPA observes:

[T]he realities of cases do not always bear out the publicity of the press releases. EPA loves the ink of the initial hype, but when targets are acquitted or convicted of only minor offenses, the agency issues no press release. Nor do the agency's losses and retreats appear in the descriptions of enforcement accomplishments in its annual reports.

Second, the database may be out of date. Environmental criminal law basically has a two-decade history, and Brickey's data is limited to the first decade. This is not the quibble that it might first appear to be. The world changed in many important respects from the beginning of Brickey's time period to the end. The RCRA regulatory scheme was phased in during the 1980s, causing a massive shake-out in the waste management business.²⁹² Generators abruptly lost the right to handle their wastes as they had for years or decades, and often had great difficulty finding legal, cost-effective alternatives.²⁹³ It is not surprising that in the 1980s prosecutors had an abundance of egregious violators to pursue. But that fact does not necessarily imply that such violators are available in such numbers today. Indeed, after a more than a decade of relative stability in waste management law, we might expect widespread adaptation to the new legal and economic realities and fewer appalling acts of desperation.

Moreover, the timing is important in another respect: not only has the waste-handling business changed considerably since the 1980s, but so, too, has the practice of environmental criminal enforcement. Enforcers have greater resources today and bring ten times as many cases per year as in the mid-1980s.²⁹⁴ While there is no necessary connection between quantity and quality of cases, it is not implausible that the greater numbers reflect more marginal cases being brought (particularly if the number of egregious violations has been dropping simultaneously). Moreover, the locus of prosecution has also changed: the decentralized United States Attorneys' Offices are playing an increasingly important role in case selection relative to the Environmental Crimes Section at Main Justice.²⁹⁵ The

DELONG, *supra* note 116, at 11.

By way of comparison to Brickey's study, Cohen's analysis of presentence investigation reports in twenty-nine environmental cases in the 1980s (overlapping Brickey's time period) found only one case that involved any known victim, and concluded that in many cases there was "little or no damage to property." Cohen, *Corporate Crime*, *supra* note 6, at 645-46. In comparing Brickey's work with Cohen's (which casts prosecuted environmental crime in a somewhat less negative light), it is perhaps significant that the presentence reports relied on by Cohen were prepared by institutionally neutral court officials, not prosecutors. At the same time, some caution is in order: Cohen has acknowledged that the presentence reports often contained little information from which one could determine the magnitude of harm caused. *Id.* at 644.

²⁹² See Carter, *supra* note 166, at 171.

²⁹³ Brickey, *Charging Practices*, *supra* note 4, at 1090-93. One hazardous waste hauler, for instance, had to raise his rates from \$600 per truckload to \$10,000. Carter, *supra* note 166, at 171.

²⁹⁴ See *supra* Part I.B.

²⁹⁵ Reitze, *supra* note 4, at 13.

decentralization of case selection likely means that case selection criteria are being applied less consistently.²⁹⁶

In sum, while Brickey implies that we should take comfort today in the prosecutorial practices of 1983 to 1992, there are reasons to question the validity of the old data. Of course, it may be that prosecutors today are just as discriminating in case selection as they were in the 1980s (or even more so), but the data that has been provided should not necessarily persuade us of the point.²⁹⁷

Third, while the data paints an appealing picture of prosecutorial discretion in general, the brushstrokes are necessarily broad. It may be the case that most environmental prosecutors target high-culpability defendants most of the time, but that does not preclude the possibility that low-culpability defendants are prosecuted with sufficient frequency to justify the concerns of Lazarus and other critics. And, in fact, commentators have anecdotally noted a great many prosecutions that do appear dubious.²⁹⁸

Indeed, it would be surprising if such prosecutions did not sometimes occur. While prosecutorial guidelines indicate that criminal enforcement

²⁹⁶ For a description of various structural reasons that USAOs are able to operate with considerable independence from Main Justice, see O'Neill, *supra* note 259, at 229. For instance, the United States Attorneys themselves are appointed by the President and confirmed by the Senate, not selected by the Attorney General. *Id.* At least one former DOJ official has complained recently that decentralization undermines assurances "that only the most valid cases are prosecuted criminally." *Justice Department Not Guilty of Overreach, Official Says*, 70 U.S.L.W. 2731 (May 21, 2002).

²⁹⁷ Firestone has analyzed some more recent data that lend support to Brickey's conclusions. Based on a study of EPA administrative, civil, and criminal enforcement actions initiated between 1990 and 1997, Firestone concluded that "environmental harm" variables explained EPA's choice of forum at a statistically significant level, i.e., enforcers seemed to pursue the relatively more harmful cases criminally rather than civilly. Firestone, *supra* note 4, at 148-49. Firestone, like Brickey, relied on EPA and DOJ documents in determining the nature of the violations at issue. *Id.* at 145-46. Moreover, Firestone treated as major violations some categories of cases in which there was no release into the environment, or the release was merely of fill material. *Id.* at 160. Nor did he distinguish among actual releases based on volume. *Id.* Thus, some of the violations that fit his harm model may actually fit into the minimal culpability category.

²⁹⁸ Kamenar, *supra* note 4, at 98-99. Consider, for instance, the case of Ocie Mills, described by one commentator as follows:

Ocie Mills of Florida placed nineteen loads of clean building sand on his quarter-acre lot. The Environmental Protection Agency and the Justice Department characterized Mr. Mills' lot as a wetland and as such, a permit was needed before discharging clean building sand. They also said that Mr. Mills knew or should have known it was a wetland. Even though that was Mr. Mills' first offense, he and his son were sentenced to twenty-one months in a federal penitentiary.

Id. at 99; see also Copeland, *supra* note 224, at 266-69 (cataloging numerous questionable prosecutions); Spence, *supra* note 4, at 988 (discussing two prosecutions arising from a dispute over the meaning of uncertain regulatory requirements).

should be reserved for culpable conduct,²⁹⁹ such guidelines are neither binding nor consistently applied.³⁰⁰ Moreover, adherence to the spirit of the prosecutorial guidelines must compete with institutional pressure on enforcers to produce high numbers of indictments, convictions, and penalties.³⁰¹ Environmental prosecutors themselves admit in surveys that, in deciding which cases to prosecute, they take into account such considerations as whether the defendant has a high profile, whether the case can be prosecuted inexpensively, and whether the defendant has been cooperative with the authorities.³⁰² None of these matters bear directly on culpability.³⁰³

Fourth, while the data may indicate that prosecutors target those outside the regulatory system (i.e., those who lack a required permit) in lieu of those inside the system (i.e., those who violate a permit), this fact does not necessarily mean that prosecutors are targeting the most culpable defendants. Indeed, one may draw precisely the opposite conclusion. We can at least be confident that violators who are in the system have been put on notice that they are subject to environmental regulations, but we cannot be so certain of others. A violator outside the system may be purposely avoiding regulatory scrutiny. Or she may be simply ignorant that her conduct happens to fall on the wrong side of one of the many obscure jurisdictional boundaries created by the environmental laws.

Fifth, the number of conspiracy charges does not necessarily indicate that the prosecuted environmental crimes are especially nefarious.

²⁹⁹ Reitze, *supra* note 4, at 16-17.

³⁰⁰ Berlin, *supra* note 253, at 115; *see also* Brown, *supra* note 103, at 331 (noting, as a more general proposition, that "prosecutors have essentially no formal external checks on their discretion"). Moreover, the prosecutorial guidelines define culpability quite broadly such that it may be established by such factors as a history of prior violations and failure to obtain a required permit. Berlin, *supra* note 253, at 115. These factors do not go in any particularly compelling way to culpability. Finally, the guidelines also suggest that it is appropriate to target low-harm violations that are pervasive in an industry for deterrence purposes. Barker, *supra* note 4, at 1408.

³⁰¹ DELONG, *supra* note 116, at 6. Adherence may also be limited by the difficulties of estimating the true scope of environmental harms. Firestone, *supra* note 4, at 128.

³⁰² Donald J. Rebovich, *Prosecutorial Decision Making and the Environmental Prosecutor: Reaching a Crossroads for Public Protection*, in ENVIRONMENTAL CRIME AND CRIMINALITY: THEORETICAL AND PRACTICAL ISSUES 77, 81-82 (Sally M. Edwards et al. eds., 1996).

³⁰³ Critics of EPA suggest that enforcement is sometimes motivated by even more dubious considerations, such as "an inspector upset over rude treatment." DELONG, *supra* note 116, at 19 (quoting DAVID RIESEL, ENVIRONMENTAL ENFORCEMENT: CIVIL AND CRIMINAL § 7.01[1] (1997)); *see also id.* at 21 ("[P]rosecutors choose enforcement instruments on the basis of a subjective view of the offender's character as a human being. Anyone who argues too hard is unlikely to be regarded as a good person.").

Prosecutors have considerable incentives to charge conspiracy because they may thereby gain significant procedural benefits, including expanded joinder opportunities, additional venue choices, and a more generous statute of limitations.³⁰⁴ Moreover, because the conspiracy statute criminalizes the conspiratorial agreement, the crime may be charged even if no substantive offense has occurred.³⁰⁵ One commentator notes: “[V]irtually all environmental crimes may give rise to conspiracy charges if they involve two or more people. . . . A group of employees who supposedly agree [not] to disclose exceedances of air or water permit limits may be charged both with CAA or CWA violations and with conspiracy.”³⁰⁶

Sixth, the sentencing data suggest that judges have not been especially impressed by the cases prosecutors have brought. This point, however, will await further elaboration until the next Part.³⁰⁷

3. *Moving the Debate Forward*

In light of the foregoing concerns, we should be reluctant to accept the strong form of Brickey’s argument, i.e., that the real-world exercise of prosecutorial discretion responds fully to concerns about the breadth of environmental criminal liability.³⁰⁸ Yet, Brickey is surely right to focus our attention on the mediating institutions in the criminal justice system, i.e., the institutions that translate abstract criminal liability into actual punishment. Such mediating institutions may help to ensure that felony incarceration is indeed reserved for only the most culpable offenders. Even though we may not fully trust prosecutors to accomplish this end by themselves, there is another mediating institution that may complement the work of prosecutors in this regard: the judiciary.

While judges may not have so much to say about guilt-innocence determinations (particularly when virtually all cases end in a guilty plea), their work as sentencers may help to correct failures on the prosecution side to distinguish between high- and low-culpability offenders. Put differently, if judges are protecting low-culpability defendants from incarceration, then perceptions of overbreadth in environmental criminal law may be substantially allayed. Indeed, safeguards in the sentencing process may

³⁰⁴ Fein, *supra* note 254, at 148.

³⁰⁵ *Id.*

³⁰⁶ *Id.*

³⁰⁷ See *infra* Part IV.E.

³⁰⁸ Outside the environmental context, other commentators have reached similar conclusions with respect to strict liability offenses and prosecutorial discretion. See, e.g., Wiley, *supra* note 237, at 1024 (describing and agreeing with Supreme Court’s rejection of prosecutorial discretion as justification for strict liability offenses).

effectively complement the sorts of prosecutorial discretion safeguards on which Brickey would rely. The sentencing judge can supply a neutral adjudication between the government's high-culpability story and the defendant's low-culpability story. To the extent that prosecutors are doing a good job of targeting high-culpability defendants, judges can thereby validate their efforts and help to close the gap between perception and reality. To the extent that prosecutors are *not* targeting high-culpability defendants, the sentencing judge can tell them as much. Indeed, by refusing to incarcerate, the sentencing judge may deliver something of a public rebuke to the over-reaching prosecutor, as well as a reassurance to the regulated community.

In short, Brickey's defense of the present state of environmental criminal law would be substantially more compelling if the sentencing process worked in tandem with the exercise of prosecutorial discretion to ensure that felony incarceration were reserved for the worst environmental offenses. Whether the sentencing process functions as such a complementary safeguard is considered in Parts IV and V below, while Part VI proposes changes to sentencing law that are intended, among other things, to strengthen its protective features. Put differently, the remainder of the Article builds on Brickey's focus on the mediating institutions in criminal justice, considering whether the operation of one of those mediating institutions (the sentencing court) may be modified so as to address concerns regarding the broad scope of environmental criminal liability. This may be viewed as a middle-ground approach that would preserve the substantive side of environmental criminal law while addressing some of the problems articulated by critics.

But, as long as we are reforming the sentencing law, why preserve the substantive law? Indeed, reforms such as those suggested by Lazarus might complement the safeguards of prosecutorial discretion and proportionate sentencing. There may be advantages, however, to defining liability broadly and relying on prosecutorial discretion and sentencing law to address concerns about sweeping low-culpability offenders into the criminal justice system. For instance, keeping culpability standards low for liability purposes facilitates the prosecution of *all* offenders, including high-culpability offenders.³⁰⁹ Moreover, retaining criminal liability for low-culpability offenders (even if not retaining incarceration as a sanction for

³⁰⁹ See, e.g., Barker, *supra* note 4, at 1414 (arguing that omission of culpability elements enhances "enforcement efficiency"); Lazarus, *Tea Leaves*, *supra* note 4, at 873 ("Relaxing mens rea . . . can dramatically improve the prosecutor's chance of success."). *But cf.* Wiley, *supra* note 237, at 1090-94 (arguing that strict criminal liability is not *necessary* for effective enforcement of regulatory laws).

such liability) means that environmental enforcers will continue to have access to other types of criminal sanctions (e.g., supervised release, community service, home detention, and forfeiture) that may be appropriate for deterrence, rehabilitation, or restitution purposes.³¹⁰

Finally, as Professor Kennedy has recently suggested, the mix of broad liability and low sentences may represent the optimal approach to shaping norms in developing areas of social regulation, like environmental law: “The conviction of the innocent offender sen[ds] a message to the community at large about the importance of the law violated, but a probationary sentence avoid[s] the morally objectionable prospect of jailing someone whose actions might not have been wrongful in the fullest sense of the word.”³¹¹ Indeed, going beyond mere conviction to incarceration of low-culpability defendants might be self-defeating: the law’s resulting loss of moral credibility might diminish, rather than enhance, the likelihood that people will internalize the norms embodied in the law.³¹²

IV. THE LAW AND PRACTICE OF ENVIRONMENTAL SENTENCING

Environmental law criminalizes a wide range of conduct, from the minimally culpable to the highly culpable. Because such a wide range of conduct is covered by the same offense elements, there is a particularly great need for the sentencing process to make the sorts of distinctions among defendants that the substantive law fails to do.³¹³ Indeed, to the extent that the sentencing process succeeds in making these distinctions—and especially to the extent that it protects low-culpability defendants from felony incarceration—then many of the chief criticisms of environmental criminal law lose much of their force.

Accordingly, this Part provides a description of federal sentencing practices with regard to environmental defendants. First, this Part offers a brief introduction to the Federal Sentencing Guidelines. Next, this Part describes the content of the Federal Guidelines that are most relevant to environmental crimes, including the 2004 amendments to the environmental guidelines. Finally, this Part considers the data on environmental

³¹⁰ See U.S. SENTENCING GUIDELINES MANUAL § 5D1.3 (2003) [hereinafter SENTENCING GUIDELINES] (describing potential conditions of supervised release).

³¹¹ Kennedy, *supra* note 89, at 758.

³¹² *Id.* at 759. Kennedy’s argument echoes important points made by Kahan and Robinson and Darley about the counterproductive possibilities of an unduly harsh criminal law. See *infra* Part VI.B.2.

³¹³ Professor Coffee has made the same argument more generally with respect to regulatory crimes with low culpability requirements. Coffee, *supra* note 131, at 202 (“[I]mplementation of the crime/tort distinction is today feasible only at the sentencing stage.”).

sentencing, focusing on the unexpected lenience shown to environmental defendants and the implications of this pattern for the Brickey-Lazarus debate.

A. FEDERAL SENTENCING GUIDELINES

Congress created the United States Sentencing Commission through the Sentencing Reform Act of 1984, mandating that the Commission develop binding new guidelines for judges to follow in sentencing federal criminal defendants.³¹⁴ Duly promulgated in 1987,³¹⁵ the United States Sentencing Commission Guidelines provide highly detailed instructions to sentencing judges.³¹⁶ At the heart of the Guidelines lies a two-dimensional, numerical grid.³¹⁷ After determining the defendant's "offense level" (the vertical axis) and criminal history category (the horizontal axis), the judge may use the grid to calculate the defendant's sentencing range, which is expressed in terms of months in prison.³¹⁸ The offense level is calculated by reference to a "base offense level" (determined largely by the offense of conviction) and the presence of particular "specific offense characteristics" ("SOCs") that result in the addition or subtraction of points from the base offense level.³¹⁹

Perceived as "rigid and mechanical," the Guidelines are deeply disliked by federal judges.³²⁰ Where judges once had almost unlimited discretion to sentence within broad statutory ranges,³²¹ the judge's role is now "largely limited to factual determinations and rudimentary arithmetic operations."³²² While judges do have some power to "depart," i.e., to sentence above or below the narrow Guidelines ranges, the opportunities for departure are strictly limited.³²³ In all events, the judge is prohibited from taking into account a variety of considerations, such as a defendant's

³¹⁴ MICHAEL TONRY, SENTENCING MATTERS 11 (1996). The relevant portions of the Sentencing Reform Act are codified at 28 U.S.C. §§ 991-94. For a thorough history of the Sentencing Reform Act, see Kate Stith & Steve Y. Koh, *The Politics of Sentencing Reform: The Legislative History of the Federal Sentencing Guidelines*, 28 WAKE FOREST L. REV. 223 (1993).

³¹⁵ Stith & Koh, *supra* note 314, at 281.

³¹⁶ TONRY, *supra* note 314, at 11.

³¹⁷ SENTENCING GUIDELINES, *supra* note 310, § 5A.

³¹⁸ *Id.*

³¹⁹ For an example, see *id.* § 2Q1.2.

³²⁰ TONRY, *supra* note 314, at 11.

³²¹ Kate Stith & José A. Cabranes, *Judging Under the Federal Sentencing Guidelines*, 91 NW. U. L. REV. 1247, 1248 (1997).

³²² *Id.* at 1255.

³²³ 18 U.S.C. § 3553(b) (2000).

deprived upbringing or drug addiction, that have been traditionally viewed by many as relevant to the sentencing calculus.³²⁴

Much of the criticism of the Guidelines has focused on three related areas of concern. The first is complexity. One judge has described the process of Guidelines sentencing this way:

[T]he sentencing judge [is] required to follow complex and abstract rules and to make minute arithmetic calculations in order to arrive at a sentence. Each step of a sentence calculation under the Guidelines represents what mathematicians call a “minimal pair”: The judge must decide whether a given factor deemed relevant by the Sentencing Commission is present or absent in the case at hand. Each decision step requires the judge to add or subtract points or “levels”—generally no more than two at a time—that will ultimately determine the sentence of the defendant.

. . . One judge . . . has likened the sentencing judge’s role under the new dispensation to that of “an accountant.”³²⁵

This complexity imposes a variety of costs on the litigants and the court system, which will be discussed at length below.³²⁶

A second area of criticism is that the Guidelines do not provide for a principled assessment of the defendant’s culpability. “The Guidelines themselves determine not only which factors are relevant (and irrelevant) to criminal punishment, but also, in most circumstances, the precise quantitative relevance of each factor.”³²⁷ Thus, “the Guidelines require judges to address many quantitative and definitional issues in excruciating detail, while staying away from larger questions relating to culpability and the purposes of criminal punishment.”³²⁸ This perception that federal sentencing has become an unprincipled process is heightened by the fact that the Commission has not traditionally provided much explanation for the decisions that it makes,³²⁹ and, indeed, has expressly declined to adopt any overarching theory of criminal punishment.³³⁰ Individual Guidelines

³²⁴ TONRY, *supra* note 314, at 11.

³²⁵ Stith & Cabranes, *supra* note 321, at 1254-55.

³²⁶ See *infra* Part VI.A.

³²⁷ Stith & Cabranes, *supra* note 321, at 1254.

³²⁸ *Id.* at 1256.

³²⁹ *Id.* at 1271.

³³⁰ See SENTENCING GUIDELINES, *supra* note 310, § 1A1.1, cmt. n.3 (noting that instead of adopting retribution or deterrence objectives, the Commission used an “empirical” approach based on average sentences in prior cases). The Commission was divided between retributivists and utilitarians, and thus, instead of endorsing either theory, the Commission instead adopted the “empirical approach,” in which sentences were established based on an analysis of past practices by sentencing judges. Aaron J. Rappaport, *Unprincipled Punishment: The U.S. Sentencing Commission’s Troubling Silence About the Purposes of Punishment*, 6 BUFF. CRIM. L. REV. 1043, 1078-80 (2003). For an argument that, in so doing,

thus take on the character of “administrative *diktats*”: particular factors must be given a particular weight at sentencing simply because the Commission says so.³³¹ In designing this system, the Commission has directed sentencing judges towards the quantitative and the objective, and away from open-ended inquiries into culpability, in order to minimize judicial discretion and, hence, the likelihood of different judges imposing different sentences in different cases.³³² But, in a system that now fails to base sentences in any clear, coherent way on culpability, there is a concern that criminal punishment has lost much legitimacy.³³³

A third area of criticism is that the Guidelines are too severe. Justice Anthony Kennedy focused on this point in a highly publicized speech in 2003.³³⁴ For instance, to note just one possible yardstick of severity, the Federal Guidelines treat the same offenses with considerably more severity than do comparable state sentencing systems.³³⁵ Moreover, the turn to guided, determinate sentencing in the United States over the past two decades has been associated with an unprecedented surge in national incarceration rates, such that American criminal punishment is now “staggeringly harsher” than punishment elsewhere in the western world.³³⁶ For instance, between 1972 and 2002, the national incarceration rate

the Commission violated Congress’s intent and produced an incoherent system, see *id.* at 1081-85. Despite the lack of an explicit overarching theory, some commentators have argued that the Guidelines do indeed reflect a coherent, if implicit, philosophy of punishment. See, e.g., Paul J. Hofer & Mark H. Allenbaugh, *The Reason Behind the Rules: Finding and Using the Philosophy of the Federal Sentencing Guidelines*, 40 AM. CRIM. L. REV. 19, 24 (2003) (arguing that “vast majority” of Guidelines provisions implement “modified just deserts” philosophy).

³³¹ Stith & Cabranes, *supra* note 321, at 1271-72.

³³² *Id.* at 1265, 1275; Douglas A. Berman, *A Common Law for This Age of Federal Sentencing: The Opportunity and Need for Judicial Lawmaking*, 11 STAN. L. & POL’Y REV. 93, 101 (1999).

³³³ Stith & Cabranes, *supra* note 321, at 1272.

³³⁴ See Paul G. Cassell, *Too Severe?: A Defense of the Federal Sentencing Guidelines (And a Critique of Federal Mandatory Minimums)*, 56 STAN. L. REV. 1017, 1018 (2004) (quoting Kennedy speech). Nor is the severity of the Guidelines accidental: one of the central motivations of many sentencing reformers in the 1970s and 1980s was increasing sentence length. Rappaport, *supra* note 330, at 1052-53.

³³⁵ Michael M. O’Hear, *National Uniformity/Local Uniformity: Reconsidering the Use of Departures to Reduce Federal-State Sentencing Disparities*, 87 IOWA L. REV. 721, 730-32 (2002) [hereinafter O’Hear, *National Uniformity*].

³³⁶ James Q. Whitman, *A Plea Against Retributivism*, 7 BUFF. CRIM. L. REV. 85, 85-87 (2003).

increased from 160 per 100,000 people to about 701 per 100,000, as compared to about 90 per 100,000 in Europe.³³⁷

B. THE ENVIRONMENTAL SENTENCING GUIDELINES

The basic environmental sentencing guidelines are set forth in three sections of the Guidelines Manual: 2Q1.1, 2Q1.2, and 2Q1.3.³³⁸ These provisions, which deal with the “mishandling” of “environmental pollutants,”³³⁹ will be referred to here as the “environmental guidelines,” or sometimes more simply as the “guidelines.” (By contrast, the United States Sentencing Guidelines as a whole will be referred to as the “Federal Guidelines,” or sometimes more simply as the “Guidelines.”)

As is typical with other areas of the Federal Guidelines, the sentencing judge is required to make a series of discrete factual determinations in environmental cases. These determinations serve, in the first instance, to place the case into one of the three environmental guidelines, each of which has its own “base offense level.” With the controlling guideline selected, the judge then makes additional findings of fact to determine which of several enumerated SOCs is present. In general, if a SOC is present, the

³³⁷ Sharon Dolovich, *Legitimate Punishment in Liberal Democracy*, 7 BUFF. CRIM. L. REV. 307, 310-11 (2004).

³³⁸ SENTENCING GUIDELINES, *supra* note 310, §§ 2Q1.1-2Q1.3. These provisions deal with the questions about whether to incarcerate an offender and, if so, for how long. These questions, which tend to be of central importance to the offender and the public, will be the focus of the remainder of this Article. The Federal Guidelines do, however, provide for other forms of punishment in addition to restrictions on the offender’s liberty. For instance, fines may be imposed, according to the framework set forth in section 5E1.2 of the United States Sentencing Guidelines Manual. *Id.* § 5E1.2. Most convicted environmental offenders receive monetary penalties of \$10,000 or less. Cohen, *supra* note 23, at 237.

³³⁹ Other environmental provisions, whose analysis lies beyond the scope of this Article, cover the sentencing of crimes that involve tampering with a public water system, placing a hazardous or injurious device on federal lands, and violating laws that protect fish, wildlife, and plants. SENTENCING GUIDELINES, *supra* note 310, §§ 2Q1.4, 2Q1.6, 2Q2.1. Despite the development of a formal proposal in 1993, the Commission has yet to adopt guidelines for sentencing corporate environmental offenders. Lemkin, *supra* note 6, at 314-17. The proposed guidelines attempted to blend features of the environmental guidelines for individual offenders with the generic corporate sentencing guidelines. Silecchia & Malinowski, *supra* note 6, at 230. However, the proposal generated substantial criticism for a number of reasons. See, e.g., Mark A. Cohen, *Environmental Sentencing Guidelines or Environmental Management Guidelines: You Can’t Have Your Cake and Eat It Too!*, 8 FED. SENTENCING REP. 225 (1996) (criticizing proposed guidelines for increasing penalties needlessly and potentially leading firms to adopt environmental management systems that are not cost-effective); Raymond W. Mushal, *Fines for Organizational Environmental Criminals: Two Approaches, But Still No Satisfactory Solution*, 8 FED. SENTENCING REP. 206, 208 (1996) (criticizing proposed guidelines for failing to take into account the size of the corporate offender).

judge is required to increase the defendant's offense level (and, hence, sentence) by a specified amount, although one environmental SOC (described below) instead requires a reduction in the offense level. An aggravating SOC (i.e., one that increases sentence severity) will be referred to here as an "aggravator." A mitigating SOC (i.e., one that decreases sentence severity) will be referred to here as a "mitigator."

The remainder of this Section discusses the current set of aggravators and mitigators that are specific to environmental cases, generic aggravators and mitigators that often apply in environmental cases, the effect of these provisions on actual sentence length, and recent amendments to the environmental guidelines that are scheduled to take effect in November 2004.

1. Current Aggravators and Mitigators

The environmental guidelines identify eleven circumstances that, if present, increase or decrease the defendant's offense level in particular ways. Specifically, the defendant's offense level will turn on the answers to the following questions:

1. Was the offense "committed with knowledge that the violation placed another person in imminent danger of death or serious bodily injury?"³⁴⁰ (The relevant guidelines provision will be referred to here as the "knowing-endangerment aggravator.")³⁴¹
2. Do the mishandled pollutants qualify as "hazardous or toxic substances or pesticides?"³⁴² (The "toxicity aggravator.")³⁴³
3. Did the offense result in a "discharge, release, or emission" of a pollutant into the environment?³⁴⁴ (The "actual-discharge aggravator.")
4. If so, was there an "ongoing, continuous, or repetitive discharge, release, or emission?"³⁴⁵ (The "ongoing-discharge aggravator.")
5. Did the offense result in a "substantial likelihood of death or serious bodily injury?"³⁴⁶ (The "physical-injury aggravator.")

³⁴⁰ SENTENCING GUIDELINES, *supra* note 310, § 2Q1.1, cmt. background.

³⁴¹ This aggravator places the defendant in a particular guideline, in this case section 2Q1.1 of the United States Sentencing Guidelines Manual, rather than adding to a base offense level, but functions much as an aggravating SOC. *Id.* § 2Q1.1.

³⁴² *Id.* § 2Q1.2.

³⁴³ This aggravator also places the defendant in a particular guideline, in this case section 2Q1.2 of the United States Sentencing Guidelines Manual, rather than adding to a base offense level, but functions much as an aggravating SOC. *Id.*

³⁴⁴ *Id.* §§ 2Q1.2(b)(1)(B), 2Q1.3(b)(1)(B).

³⁴⁵ *Id.* §§ 2Q1.2(b)(1)(A), 2Q1.3(b)(1)(A).

6. Did the offense result in “disruption of public utilities?”³⁴⁷ (The “utilities-disruption aggravator.”)
7. Did the offense result in “evacuation of a community?”³⁴⁸ (The “evacuation aggravator.”)
8. Did the offense result in a cleanup that required “substantial expenditure?”³⁴⁹ (The “cleanup aggravator.”)
9. Did the offense involve the “violation of a permit?”³⁵⁰ (The “permit-violation aggravator.”)
10. Did the offense involve a failure to obtain a required permit?³⁵¹ (The “no-permit aggravator.”)
11. Was the offense merely a “recordkeeping or reporting violation?”³⁵² (The “mere-paperwork mitigator.”)

If any of the first ten questions are answered in the affirmative, the judge must increase the defendant’s offense level in specified ways. An affirmative answer to the eleventh question reduces the offense level.

While the guidelines specify a weight to be given to each of the SOCs, the guidelines also provide sentencing judges with some flexibility by authorizing modest departures with respect to several of the SOCs. The SOC departures permit the judge to increase or decrease the offense level by small amounts based on case-specific dangerousness and harm considerations. For instance, while the guidelines specify that a defendant’s offense level should be increased by four when there has been an actual discharge of contaminants into the environment, the guidelines also indicate that “[d]epending upon the harm resulting from the emission, release, or discharge, the quantity and nature of the substance or pollutant, the duration of the offense and the risk associated with the violation, a departure of up to two levels in either direction . . . may be appropriate.”³⁵³ Similar “guided” departures are authorized with respect to the physical-injury, utilities-disruption, evacuation, cleanup, permit-violation, and no-permit aggravators.³⁵⁴

³⁴⁶ *Id.* §§ 2Q1.2(b)(2), 2Q1.3(b)(2).

³⁴⁷ *Id.* §§ 2Q1.2(b)(3), 2Q1.3(b)(3).

³⁴⁸ *Id.*

³⁴⁹ *Id.*

³⁵⁰ *Id.* §§ 2Q1.2(b)(4), 2Q1.3(b)(4).

³⁵¹ *Id.*

³⁵² *Id.* § 2Q1.2(b)(6).

³⁵³ *Id.* § 2Q1.2, cmt. n.5; *see also id.* § 2Q1.3, cmt. n.4 (same language).

³⁵⁴ *Id.* § 2Q1.2, cmt. nn.6-8.

2. Other Relevant Guidelines

In addition to the factual determinations that are specific to environmental offenses, the judge may also be required to adjust the offense level based on factual determinations described in other, more general provisions of the Guidelines. Among the most important of these other factual determinations in environmental cases are the following:

1. Was the defendant an "organizer or leader" of a criminal activity?³⁵⁵
2. Was the defendant a "manager or supervisor (but not an organizer or leader)" of a criminal activity?³⁵⁶
3. If the answer to either of the two foregoing questions is in the affirmative, was the criminal activity "extensive?"³⁵⁷
4. Was the defendant a "minimal participant" in the criminal activity?³⁵⁸
5. If not, was the defendant a "minor participant" in the criminal activity?³⁵⁹
6. Did the defendant abuse a "position of trust?"³⁶⁰
7. Did the defendant use a "special skill in a manner that significantly facilitated the commission or concealment of the offense?"³⁶¹
8. Did the defendant obstruct justice?³⁶²
9. Does the defendant accept responsibility for the offense?³⁶³

Additionally, the criminal history of the environmental defendant (like that of all defendants) plays an important role in the federal sentencing calculus.³⁶⁴

3. Actual Sentence Length

Because an environmental defendant's sentence is contingent on such a large number of variables, there is no simple way to characterize how severely environmental crimes are treated by the Guidelines. A few

³⁵⁵ *Id.* § 3B1.1(a), (c).

³⁵⁶ *Id.* § 3B1.1(b)-(c).

³⁵⁷ *Id.* § 3B1.1(a)-(b).

³⁵⁸ *Id.* § 3B1.2(a).

³⁵⁹ *Id.* § 3B1.2(b).

³⁶⁰ *Id.* § 3B1.3.

³⁶¹ *Id.*

³⁶² *Id.* § 3C1.1.

³⁶³ *Id.* § 3E1.1.

³⁶⁴ *Id.* § 5A.

hypothetical scenarios may help to illustrate the range of possibilities. First, a near-worst-case scenario: the defendant caused a release of toxic chemicals knowing that the release would put another person in “imminent danger” of serious bodily injury. Assuming that the defendant was the leader of an extensive criminal activity, does not accept responsibility for the offense, and has no prior criminal record, the defendant would face seventy-eight to ninety-seven months in prison (i.e., about seven to eight years). Next, a near-best-case scenario: the defendant was responsible merely for recordkeeping violations relating to nontoxic pollutants. Assuming no “role-related” adjustments, acceptance of responsibility, and no prior criminal record, the defendant would face zero to six months in jail. Finally, a more realistic, middle-of-the-road scenario: the defendant caused a one-time release of toxic chemicals without a required permit that resulted in an expensive cleanup. Assuming no role adjustment, acceptance of responsibility, and no prior criminal record, the defendant would face twenty-four to thirty months in prison.

While a range of possibilities are available, at least one important generalization may be made: where there has been an actual discharge of pollutants into the environment (as opposed to a mere recordkeeping violation), the Guidelines will nearly always mandate at least a short period of incarceration. Even the discharge of a small amount of a nontoxic pollutant results in an offense level of ten,³⁶⁵ which carries a presumptive term of six to twelve months in jail.³⁶⁶ In short, the Guidelines are designed to put “green-collar” offenders behind bars,³⁶⁷ even if only for a relatively brief period of time.³⁶⁸

³⁶⁵ See *id.* §§ 2Q1.3(a), (b)(1)(B).

³⁶⁶ See *id.* § 5A. This represents a significant break from pre-guidelines practice: “[b]efore the guidelines were promulgated, no person ever was imprisoned for discharging non-toxic, non-hazardous pollutants.” Paul D. Kamenar, *Proposed Corporate Guidelines for Environmental Offenses*, 3 FED. SENTENCING REP. 146, 147 (1990); see also Cohen, *Theory*, *supra* note 6, at 1100-01 (“On balance, the new guidelines will not only significantly increase the incarceration rate, but will also likely result in a substantial increase in the average length of imprisonment. . . .”). Indeed, some critics have argued that the Commission’s failure to determine and rely on past practices in sentencing environmental crimes contravenes the Commission’s statutory mandate. Kamenar, *supra* note 4, at 103.

³⁶⁷ I borrow the term “green-collar” offenders from Jane F. Barrett, “*Green Collar*” *Criminals: Why Should They Receive Special Treatment?*, 8 MD. J. CONTEMP. LEGAL ISSUES 107 (1997).

³⁶⁸ This may be seen as part of a broader agenda by the Commission to increase sentence lengths for white-collar offenders. Cohen, *Theory*, *supra* note 6, at 1099-1100. The guidelines’ apparent preference for incarceration in environmental cases has been criticized as inconsistent with 28 U.S.C. § 994(j), which states that “the Commission shall insure that the guidelines reflect the general inappropriateness of imposing a sentence to a term of imprisonment in cases in which the defendant is a first offender who has not been convicted

4. 2004 Amendment

In April 2004, the Commission promulgated an amendment to the environmental guidelines that recognizes a new SOC.³⁶⁹ The amendment will take effect in November 2004 unless Congress disapproves the amendment during a mandatory six-month review period.³⁷⁰ Specifically, the amendment would add a new aggravator for violations of statutes that regulate the transportation of hazardous materials (the “hazmat aggravator”).³⁷¹ The Commission has justified this amendment because such violations “pose an inherent risk to large populations in a manner not typically associated with other pollution offenses.”³⁷²

The Department of Justice, which instigated the amendment, has suggested that the new aggravator is necessary for certain conduct that poses great risk to the public, but that fails to trigger any of the existing aggravators.³⁷³ One official offered the following example:

[O]ne of our most recent cases . . . I think demonstrates the problem. It was the prosecution of Emory Worldwide Airlines. Emory pleaded guilty in the Southern District of Ohio to on hundreds of occasions putting hazardous materials aboard their aircraft without providing notice to the pilots, without taking any precautions to make sure that the hazardous material was onboard safely.

Notwithstanding the significant risks to the pilots and to the general public in that case, if . . . individuals had been prosecuted in that case, they would have received sentences at the base offense level of eight and nothing more. That in a nutshell captures the problem with the existing guideline.³⁷⁴

of a crime of violence or an otherwise serious offense.” Sharp & Shen, *supra* note 6, at 298. The courts, however, have rejected such arguments. *See, e.g.,* United States v. Strandquist, 993 F.2d 395, 399 (4th Cir. 1993).

³⁶⁹ Press Release, U.S. Sentencing Comm’n, Sentencing Commission Toughens Requirements for Corporate Compliance and Ethics Programs (Apr. 13, 2004), available at <http://www.ussc.gov/PRESS/rel0404.htm>.

³⁷⁰ *Id.*

³⁷¹ SENTENCING GUIDELINES, *supra* note 310, § 2Q1.2(b)(7) (proposed).

³⁷² Sentencing Guidelines for United States Courts, 69 Fed. Reg. 28994, 29018 (May 19, 2004).

³⁷³ Testimony of David Uhlmann, Chief, Environmental Crimes Section of the U.S. Dep’t of Justice, Before the U.S. Sentencing Comm’n (March 17, 2004) [hereinafter Uhlmann Testimony].

³⁷⁴ *Id.* The amendment also includes two new departure provisions, but these would not truly add anything new to the guidelines. They simply make explicit that two generic bases for upward departure apply to environmental cases, namely, if the defendant had a terrorist motive in the mishandling of hazardous materials or if the offense caused extreme psychological injury. SENTENCING GUIDELINES, *supra* note 310, § 2Q1.2 cmt. n.9 (proposed). The amendment would also preserve an existing provision that authorizes an upward

C. THE CHALLENGE OF *BLAKELY*

The Guidelines contemplate that a judge will perform any fact-finding necessary at sentencing, such as determining the existence of a SOC, using the preponderance of the evidence standard.³⁷⁵ In June 2004, however, the Supreme Court held in *Blakely v. Washington* that “[w]hen a judge inflicts punishment that the jury’s verdict alone does not allow . . . the judge exceeds his proper authority.”³⁷⁶ While *Blakely* dealt with state sentencing procedures in Washington, not the Federal Guidelines, it is possible that the Court’s holding (which was based on the Sixth Amendment right to a jury trial) will be applied to the federal system, too.³⁷⁷ If so, the current procedures for determining whether an aggravator applies would no longer be permissible, absent the defendant’s waiver of *Blakely* rights.

The ultimate significance of *Blakely* for federal sentencing remains uncertain. Courts have essentially staked out three positions. First, some courts (most notably the Fifth Circuit) have ruled that *Blakely* does not apply to federal sentencing, thus effectively retaining the *status quo ante*.³⁷⁸ Second, other courts (most notably the Eighth Circuit) have ruled that *Blakely* broadly invalidates the whole system of binding Federal Guidelines.³⁷⁹ Such courts have indicated, however, that the Guidelines should continue to be consulted as *non-binding* guidance at sentencing.³⁸⁰ Third, other courts (most notably the Ninth Circuit) have staked out a middle-ground position: the Guidelines continue to function as binding rules of sentencing law, except that now aggravating SOCs will have to be found by a jury beyond a reasonable doubt.³⁸¹ In light of the procedural

departure where the defendant’s criminal history score does not adequately reflect the defendant’s prior history of environmental violations. *Id.*

As a whole, the amendment package is perhaps best viewed as an attempt to address concerns about the potentially catastrophic misuse of hazardous materials by terrorists, which was not likely contemplated by the Commission when originally drafting the environmental guidelines. In defending the proposed amendment, one DOJ official cited a case in which terror suspects were accused of fraudulently obtaining licenses to transport hazardous materials, and referred generally to DOJ’s broader post-9/11 objective of “button[ing] down America in all areas where we have potential vulnerability.” Uhlmann Testimony, *supra* note 373.

³⁷⁵ SENTENCING GUIDELINES, *supra* note 310, § 6A1.3 cmt.

³⁷⁶ 124 S.Ct. 2531, 2537 (2004).

³⁷⁷ *Id.* at 2549-50 (O’Connor, J., dissenting).

³⁷⁸ *United States v. Pineiro*, 377 F.3d 464, 465 (5th Cir. 2004).

³⁷⁹ *United States v. Mooney*, 2004 WL 1636960 (8th Cir. July, 24, 2004). The panel decision in *Mooney* was subsequently vacated for rehearing en banc. The matter remains pending as this Article goes to press.

³⁸⁰ *Id.*

³⁸¹ *United States v. Ameline*, 376 F.3d 967, 980 (9th Cir. 2004).

burdens and uncertainties this approach would impose, prosecutors may choose not to pursue otherwise provable aggravators, thus potentially resulting in a general shortening of sentence lengths. The Supreme Court has already granted *certiorari* to address the circuit split.³⁸²

However the split is resolved, the environmental guidelines will retain importance under all three approaches, even if only as non-binding guidance for judges, as under the Eighth Circuit's approach. Moreover, under either the Eighth or the Ninth Circuit's approaches, the defendant may waive *Blakely* rights and consent to judicial sentencing under the Federal Guidelines as in the pre-*Blakely* world. A defendant might choose to do so in return for benefits received in plea-bargaining, or (to the extent that courts adopt the Eighth Circuit's indeterminate sentencing approach) in order to constrain a judge who is believed to be especially tough on environmental defendants, or (to the extent that courts adopt the Ninth Circuit's jury-sentencing approach) in order to constrain a similarly unfavorable jury.

Congress and the Commission seem to be giving the Supreme Court an opportunity to resolve the split before deciding whether the Federal Guidelines require any sort of structural reform to address *Blakely*. If the Court were to adopt the approach of either the Eighth or Ninth Circuits, there might be a range of legislative responses. Indeed, Congress might effectively reinstitute the *status quo ante* by taking advantage of the curious asymmetry of *Blakely*: aggravating SOCs must be found by a jury, but mitigating SOCs may be found by a judge. Thus, the current judicial role at sentencing may be retained by raising base offense levels across the board to worst-case-scenario levels, and then converting aggravators into mitigators. For instance, the base offense level for environmental crimes might be revised upward so as to reflect an assumption of substantial cleanup expenditures. A "no-cleanup" mitigator could then be created to reduce offense levels in cases in which there was little remediation. Except in the few marginal cases in which the burden of persuasion is decisive, the bottom-line result should be the same as would have been reached pre-*Blakely*.

Whatever the legislative response, new constitutional constraints on sentencing procedure are likely to create an unprecedented opportunity for Congress and the Commission to revisit basic decisions about the structure of the Guidelines. This opportunity, in turn, lends some urgency to a critical evaluation of the current Guidelines, examining how they have been implemented and identifying their strengths and weaknesses. The

³⁸² United States v. Fanfan, No. 04-105, 2004 WL 1713655 (U.S. Aug. 2, 2004).

remainder of this Article provides just such a critical evaluation of the environmental guidelines.

D. GUIDELINES APPLICATION

Despite the apparent objectives of the environmental guidelines, Sentencing Commission data make clear that prison is the exception, not the norm, for environmental defendants. Table 1 summarizes the most recent six-year period for which data is available. Federal courts sentenced 663 environmental defendants in that time period, or about one for each district court judge over the entire six years.³⁸³ In these cases, only a little more than one-third of the defendants received a prison term. By comparison, during the same time period, more than eighty percent of all sentenced federal defendants received a prison term. We can thus conclude that federal judges are not otherwise reticent about handing out prison sentences.

Table 1
*Environmental Defendants Sentenced to Prison Terms*³⁸⁴

Fiscal Year	Sentenced Environmental Defendants ³⁸⁵	Environmental Defendants Receiving Prison Sentence ³⁸⁶	Percentage of Environmental Defendants Receiving Prison Sentence	Percentage of All Defendants Receiving Prison Sentence
1996	64	33	51.6	79.1
1997	127	53	41.7	77.8
1998	122	50	40.9	81.3
1999	127	42	33.1	81.4
2000	137	42	30.7	84.2
2001	86	20	23.3	84.5
Total	663	240	36.2	81.6

³⁸³ See 28 U.S.C. § 133 (2004) (authorizing 663 federal district court judgeships).

³⁸⁴ Unless indicated otherwise, the source for the data in all of the tables in this Section is the United States Sentencing Commission. Commission data are available on-line at http://fjsrc.urban.org/noframe/wqs/q_intro.cfm, a site maintained by the Federal Justice Statistics Resource Center and funded by the Bureau of Justice Statistics of the United States Department of Justice. Unless otherwise indicated, references to "environmental defendants" in this Section refer to sentenced federal defendants whose highest adjusted offense level was based on Sections 2Q1.1, 2Q1.2, or 2Q1.3 of the Guidelines.

³⁸⁵ Includes all defendants listed in Sentencing Commission data as receiving any of the following dispositions: fine only, prison only, prison plus alternative confinement, probation plus alternative confinement, or probation only.

³⁸⁶ Includes defendants listed in Sentencing Commission data as receiving prison only or prison plus alternative confinement.

Table 1 also indicates that the discrepancy between environmental defendants and all federal defendants seems to be increasing over time. The percentage of environmental defendants going to prison has declined each year since 1996, going from more than half to less than one-quarter. Meanwhile, the percentage of all defendants going to prison has shifted upward, albeit much less dramatically. In short, the apparent trend towards lenience for environmental defendants does not seem to reflect a more general trend towards lenience for all federal defendants.

Among the minority of environmental defendants who do receive prison terms, the length of the terms is relatively short. As shown in Table 2, nearly sixty percent are sentenced to one year or less—another indicator of lenience that has trended upward. Fewer than ten percent are sentenced to more than four years. By comparison, as indicated in Table 3, less than one-quarter of all defendants receiving prison terms get a year or less, while more than forty-five percent get more than four years.

Table 2
*Length of Prison Term for Environmental Defendants Receiving
Prison Sentence*³⁸⁷

Fiscal Year	0-1 Year (Percent)	1-2 Years (Percent)	2-4 Years (Percent)	4-6 Years (Percent)	More Than 6 Years (Percent)
1995	53.6	25.0	14.3	7.1	0
1996	54.5	21.2	21.2	3.0	0
1997	57.4	20.4	14.8	5.6	1.9
1998	70.0	20.0	8.0	2.0	0
1999	47.6	26.2	14.3	4.8	7.1
2000	71.4	11.9	7.1	4.8	4.8
2001	65.0	20.0	10.0	5.0	0
Average	59.8	20.7	12.8	4.6	2.0

³⁸⁷ See *supra* note 384.

Table 3

*Length of Prison Term for All Federal Defendants Receiving Prison Sentence*³⁸⁸

Fiscal Year	0-1 Year (Percent)	1-2 Years (Percent)	2-4 Years (Percent)	4-6 Years (Percent)	More Than 6 Years (Percent)
1995	23.9	18.4	18.8	13.8	24.9
1996	23.6	19.1	19.6	13.8	23.9
1997	25.0	19.1	20.6	13.2	21.9
1998	24.9	18.8	20.1	13.3	22.8
1999	24.7	17.9	21.1	14.0	22.2
2000	24.6	17.9	21.6	14.5	21.5
2001	23.4	18.2	22.6	14.4	21.5
Average	24.3	18.5	20.6	13.9	22.7

Environmental defendants thus seem to be treated with lenience relative both to other federal defendants and to what one might expect based on the structure of the relevant sentencing guidelines. Indeed, notwithstanding the Commission's evident intent to increase environmental sentences,³⁸⁹ and the occasional headline-grabbing case in which a long sentence is imposed,³⁹⁰ it appears that federal judges may have simply adhered to (or, at least, are in the process of returning to) pre-Guidelines practices. Studies of environmental sentencing before the Guidelines indicate that most convicted defendants received probation, and that, among those who were incarcerated, the median term was only about six months.³⁹¹ The failure of the Guidelines to bring about much durable change in *district court* practice is all the more surprising in light of how the *appellate courts* have handled the environmental guidelines: as will be discussed in greater detail in the next Part, the appellate courts have, almost without exception, rejected the sentencing appeals of environmental defendants and adopted expansive interpretations of the environmental aggravators.³⁹²

How do the district courts reach such unexpected sentencing results? The data suggest a variety of explanations. For instance, the data indicate that, by and large, environmental defendants have little criminal history, which plays an important role in determining sentence length under the

³⁸⁸ See *supra* note 384.

³⁸⁹ See Cohen, *Theory, supra* note 6, at 1100-01 ("On balance, the new guidelines will not only significantly increase the incarceration rate, but will also likely result in a substantial increase in the average length of imprisonment . . .").

³⁹⁰ See, e.g., *supra* note 298 (describing *Mills* case).

³⁹¹ Cohen, *Theory, supra* note 6, at 1085.

³⁹² See *infra* Part V.B.1.f.

Guidelines. As indicated in Table 4, nearly ninety percent of sentenced environmental defendants are in criminal history category I, which is the lowest category. By contrast less than fifty-five percent of all sentenced defendants fall into this category. The dearth of repeat offenders may be the result of any of a number of different factors, including: successful specific deterrence and/or rehabilitation in the criminal justice system; the difficulty of detecting environmental violations (perhaps made the more so when the convicted violator has learned from his or her "mistakes" the first time); and the inability, post-conviction, for defendants to obtain the sort of managerial job that would create opportunities for additional environmental violations.

Table 4
*Criminal History of Sentenced Environmental Defendants and All Sentenced Federal Defendants*³⁹³

Fiscal Year	Sentenced Environmental Defendants in Category I (percent)	All Sentenced Defendants in Category I (percent)
1995	87.8	57.3
1996	92.6	56.1
1997	88.7	56.8
1998	86.4	54.9
1999	84.3	53.3
2000	86.5	52.3
2001	92.0	50.9
Average	88.3	54.5

Consider next the data on "sentencing within range." Based on criminal history category and offense level, the Guidelines dictate a sentencing range, leaving the judge nearly unlimited discretion to select an actual sentence length within that range. In environmental cases, judges select the very lowest point within the range with remarkable consistency. As indicated in Table 5, more than eighty percent of environmental defendants receive a sentence at the Guidelines minimum, as against just over sixty percent of defendants generally. This suggests that judges in environmental cases consistently find the minimum Guidelines sentence to be at or above what the judge considers to be the maximum just sentence. The data further suggest that judges are using what discretion they possess in the Guidelines regime to minimize the sentences of environmental defendants.

³⁹³ See *supra* note 384.

Table 5
*Sentencing Within Range*³⁹⁴

Fiscal Year	Environmental Defendants Sentenced at Guideline Minimum (percent)	All Defendants Sentenced at Guideline Minimum (percent)
1997	92.0	57.4
1998	75.4	60.3
1999	81.2	61.7
2000	84.3	62.7
2001	75.0	62.3
2002	81.0	59.8
Average	81.5	60.7

This tendency is perhaps nowhere more importantly manifested than in the departure data. As indicated in Table 6, downward departures in environmental cases are routine, approaching nearly fifty percent during the most recent six-year period. When “departing downward,” the judge imposes a sentence below the otherwise mandatory Guidelines range. Downward departures may be granted based either on the defendant’s “substantial assistance” to the government³⁹⁵ or on the presence of some mitigating circumstance not adequately taken into account by the Commission in formulating the Guidelines.³⁹⁶ Environmental defendants receive both types of departure in substantial numbers, although the mitigating circumstance departures have been a bit more common. Table 7 permits a comparison with all federal cases: in sharp contrast to the environmental cases, only about one-third of all sentenced federal defendants receive downward departures. Nearly all of the discrepancy is a result of mitigating circumstance departures: environmental defendants receive such departures more than twice as often as other defendants.

³⁹⁴ Sources for the data are as follows: U.S. SENTENCING COMM’N, 2002 SOURCEBOOK OF FEDERAL SENTENCING STATISTICS 59 (2002); U.S. SENTENCING COMM’N, 2001 SOURCEBOOK OF FEDERAL SENTENCING STATISTICS 59 (2001); U.S. SENTENCING COMM’N, 2000 SOURCEBOOK OF FEDERAL SENTENCING STATISTICS 59 (2000); U.S. SENTENCING COMM’N, 1999 SOURCEBOOK OF FEDERAL SENTENCING STATISTICS 59 (1999); U.S. SENTENCING COMM’N, 1998 SOURCEBOOK OF FEDERAL SENTENCING STATISTICS 59 (1998); U.S. SENTENCING COMM’N, 1997 SOURCEBOOK OF FEDERAL SENTENCING STATISTICS 59 (1997). Note that the data reported here regarding “environmental defendants” includes all sentenced defendants in environmental and wildlife cases.

³⁹⁵ SENTENCING GUIDELINES, *supra* note 310, § 5K1.1.

³⁹⁶ *Id.* § 5K2.0.

Table 6
*Departure Rates for Sentenced Environmental Defendants*³⁹⁷

Fiscal Year	Substantial Assistance Departures (Percent)	Mitigating Circumstance Departures (Percent)	Total Downward Departures (Percent)
1995	13.1	28.6	41.7
1996	20.6	20.6	41.2
1997	24.8	31.2	56.0
1998	21.8	25.5	47.3
1999	11.7	30.8	42.5
2000	26.3	31.6	57.9
2001	12.8	29.5	42.3
Totals	19.4	28.8	48.2

Table 7
*Departure Rates for All Sentenced Federal Defendants*³⁹⁸

Fiscal Year	Substantial Assistance Departures (Percent)	Mitigating Circumstance Departures (Percent)	Total Downward Departures (Percent)
1995	19.9	8.5	28.4
1996	19.1	10.3	29.4
1997	19.1	12.1	31.2
1998	19.3	13.6	32.9
1999	18.7	15.8	34.5
2000	17.7	16.9	34.3
2001	17.0	18.2	35.2
Totals	18.6	14.0	32.6

Why are judges so generous in giving mitigating circumstance departures to environmental defendants? Table 8 reports the most commonly offered reasons for departures in environmental cases, as reported in Commission records.³⁹⁹ Table 9 reflects my attempts to reorganize the data, so that similar explanations are grouped together, which allows for more meaningful frequency comparisons. Most notably, the Commission's data indicates that sentencing judges have relied to a considerable extent on basic culpability considerations (harm, risk, state of

³⁹⁷ See *supra* note 384.

³⁹⁸ See *supra* note 384.

³⁹⁹ Table 8 reflects Commission data on judicial explanations for departures. Unfortunately, explanations are not always available, and, when they are provided, not always illuminating. The data must accordingly be used with particular caution.

mind) in justifying departures. Indeed, as far as can be seen from the data, these considerations far exceed defendants' personal characteristics and circumstances, such as family responsibilities, in importance.

Table 8
*Most Frequent Reasons for Departure in Environmental Cases*⁴⁰⁰
*Explanation & Number of Times Mentioned*⁴⁰¹

Explanation	Number of Times Mentioned ⁴⁰²
Substantial Assistance	152
Explanation Missing	84
Harm From Emission	49
Negligence	34
Aggravating Circumstances	30
Plea Agreement	24
Other/No Reason Provided	22
Harm From Quantity	21
Nature of Contamination	19
Physical Condition	14
Harm From Risk	12
Not Representative of "Heartland" of Offense Type	12
Failure to Comply With Order	12
Harm From Risk	11
Criminal History	10
Isolated Incident	10
Harm From Duration	8
Family Ties and Responsibilities	8

⁴⁰⁰ See *supra* note 384.

⁴⁰¹ Note that judges sometimes offer multiple explanations for a single departure. Where multiple explanations have been offered, the Commission data (and, hence, this Table) reflects only the first three.

⁴⁰² See *supra* note 401.

Table 9*Categories of Departure Explanations in Environmental Cases*

Category of Explanation	Number of Times Mentioned
Substantial Assistance	152
Uncertain ⁴⁰³	148
Harm/Risk ⁴⁰⁴	120
State of Mind ⁴⁰⁵	46
Defendant's Characteristics ⁴⁰⁶	32
Plea Agreement	24

Viewing the data, one might at least tentatively hypothesize that judges find the environmental guidelines to be overly harsh relative to the actual culpability of the environmental defendants they see in their courtrooms. High downward departure rates, coupled with an emphasis on culpability factors in explaining those departures, suggest that low-culpability defendants (or at least those perceived by judges to be low-culpability defendants) are being prosecuted in substantial numbers, and that the guidelines have not been well-designed to distinguish between low- and high-culpability defendants. In this view, judges are trying to use the departure mechanism to correct the tendency of the guidelines towards disproportionate sentences for low-culpability offenders.⁴⁰⁷ This view finds additional support in the sentencing within range data discussed above.

Indeed, line prosecutors may very well be complicit in the effort to mitigate the harshness of the Guidelines. They are the gatekeepers to departures on the ground of substantial assistance⁴⁰⁸—the single most common ground for departure—as well as departures pursuant to plea agreement, another relatively common ground. Moreover, the high rates of departure on other grounds likely reflect some degree of prosecutorial acquiescence in the reduced sentences: in general, few departures are made

⁴⁰³ This includes the following entries in the Commission data: missing, aggravating circumstance, other/no real reason, and not representative of the heartland.

⁴⁰⁴ This includes the following entries in the Commission data: harm from emission, harm from quantity, harm from duration, harm from risk, nature of contamination, and nature of risk.

⁴⁰⁵ This includes the following entries in the Commission data: negligence and failure to comply with order.

⁴⁰⁶ This includes the following entries in the Commission data: physical condition, criminal history, and family ties and responsibilities.

⁴⁰⁷ Professor Cohen has provided additional anecdotal evidence that judges tend to sentence low-culpability cases more leniently. Cohen, *Theory*, *supra* note 6, at 1062-63.

⁴⁰⁸ See SENTENCING GUIDELINES, *supra* note 310, § 5K1.1 (requiring government motion for substantial assistance departure).

without the support of the government, and almost none are appealed by the government.⁴⁰⁹

E. IMPLICATIONS FOR THE LAZARUS-BRICKY DEBATE

The sentencing data provide helpful new perspectives on the Lazarus-Brickey debate. For instance, the data support the view that concerns about the overbreadth of environmental criminal law are overstated: few environmental defendants go to prison, and, of those who do, most receive a misdemeanor-level sentence length (i.e., a year or less). Put differently, the behavior of sentencing judges tends to validate Brickey's reliance on the mediating institutions of criminal justice to protect low-culpability defendants from imprisonment.

On the other hand, because the lenience at sentencing derives from departures and other discretionary, ad hoc judicial decisions, rather than from the formal mandates of the environmental guidelines, the lenience may provide little reassurance to regulated community. Indeed, prior commentators have not even observed the trend. Thus, the realities of sentencing may not really address the perception problems identified by Lazarus and others. This suggests a need for reform of the guidelines to bring about greater conformity with actual sentencing practices.

Additionally, the sentencing data may leave us less confident in the charging practices of environmental prosecutors. Simply put, it does not appear that judges have been impressed with the need to employ felony incarceration as a sanction in most environmental cases. To be sure, the reasons for this judicial point of view are not entirely clear. Perhaps judges

⁴⁰⁹ U.S. SENTENCING COMM'N, REPORT TO THE CONGRESS: DOWNWARD DEPARTURES FROM THE FEDERAL SENTENCING GUIDELINES 55-56, 60 (2003). See generally Daniel J. Freed, *Federal Sentencing in the Wake of the Guidelines: Unacceptable Limits on the Discretion of Sentencers*, 101 YALE L.J. 1681, 1723 (1992) ("Discretionary decisions of Assistant U.S. Attorneys . . . can powerfully expand or limit the judge's ambit for sentencing.").

Taking the prosecutorial acquiescence theory one step further, the growth in environmental departure rates may be related to the concurrent diminution in prosecutorial power of DOJ's specialized Environmental Crimes Section relative to the generalist United States Attorneys' Offices. Reitze, *supra* note 4, at 8. The USAOs likely have a lesser institutional interest in seeing environmental violations treated as high culpability offenses *per se*, and (as repeat players) a greater interest in working cooperatively with local district court judges and defense counsel. However, whatever prosecutorial practices have been in the recent past, they may be changing now as a result of statutory changes not yet reflected in the Commission's data. In 2003, Congress enacted the "Feeney Amendment," which is intended to reduce departure rates by, *inter alia*, subjecting line prosecutors to more scrutiny by Main Justice and discouraging their acquiescence to unjustified departures. U.S. SENTENCING COMM'N, *infra* Appendix B-31.

are taking into account considerations that are generally discouraged or prohibited under the Guidelines, such as the defendant's family responsibilities, or prior good works in the community, or efforts to make amends after the offense.⁴¹⁰ Such considerations do not bear directly on culpability and do not necessarily call into question the prosecutor's underlying decision to charge. Still, non-incarcerative sanctions, bottom-of-the-range sentences, downward departures, and culpability-based explanations are sufficiently common that one can reasonably conclude there are a sizeable number of environmental defendants who are perceived by the sentencing judge to be low-culpability defendants. Indeed, as noted in the previous Section, the departure statistics suggest that some prosecutors may also regard some of their targets as low-culpability defendants.⁴¹¹

But perhaps Brickey would object: if judges perceive low-culpability defendants, the problem lies with the judges' failure to appreciate the seriousness of environmental violations, not with prosecutorial overreaching. And, indeed, this is precisely the view that has been articulated by many specialized environmental prosecutors. In one survey, for instance, prosecutors indicated "that they proceed under the assumption that many judges are going to look at these [environmental] cases as 'major inconveniences.'"⁴¹² The attitude of judges is attributed to their position as criminal law generalists, as against the specialized perspective of environmental enforcers:

For judges, part of the problem of accepting a criminal connotation for environmental offenses can be traced to a natural comparison of environmental offenses to other offenses that these judges are routinely exposed to. These other offenses may be ones which entail elements of traditional person-to-person violence and involve individual victims who have incurred injuries from the violent acts. . . . The overriding problem was seen by these prosecutors as a lack of appreciation of the danger posed by environmental offenses coupled with the dispersal of victimization among many individuals.⁴¹³

To be sure, busy judges may lack sufficient appreciation for highly technical evidence regarding incremental increases in the risk of future

⁴¹⁰ SENTENCING GUIDELINES, *supra* note 310, § 5K2.0(d).

⁴¹¹ Nor would this viewpoint be inconsistent with the decision to charge. A prosecutor might knowingly prosecute a low-culpability defendant in order, for instance, to pressure the defendant into cooperating with the prosecution of another person, or to publicize the risk of prosecution so as to deter other violators.

⁴¹² Rebovich, *supra* note 302, at 86.

⁴¹³ *Id.*

injury and other intangible harms.⁴¹⁴ Yet, if there is a gap in the perception of culpability between generalist judges and specialist prosecutors, we should not leap to the conclusion that the judges have it all wrong. After all, the judges have a unique perspective on relative culpability across offenses that a specialized prosecutor may lack. Moreover, numerous empirical studies indicate that judicial sentencing practices tend to reflect the preferences of the general public, which suggests that judges may indeed do a good job of implementing community views of blameworthiness.⁴¹⁵ Finally, there are good reasons to believe, as discussed in the previous Part, that prosecutors do target some offenders for reasons other than high culpability.⁴¹⁶

In sum, while the sentencing data suggest that criticisms of environmental criminal law have been overstated, they also underscore the importance of the sentencing process as a check on prosecutorial discretion and indicate a need for reform of the guidelines so as to help the safeguard operate in a more systematic and transparent fashion. Against this backdrop, the next Part offers a more comprehensive critique of the environmental guidelines as currently written.

⁴¹⁴ Additionally, the lenience shown to environmental offenders may reflect a broader tendency towards special treatment of white-collar offenders. Since Edwin Sutherland's pathbreaking work on white-collar crime, Edwin H. Sutherland, *White-Collar Criminality*, 5 AM. SOC. REV. 1 (1940), many scholars have considered the criminal justice system's treatment of such offenses in comparison with that of street crime. JOHN BRAITHWAITE, *RESTORATIVE JUSTICE & RESPONSIVE REGULATION* 16 (2002); see, e.g., Darryl K. Brown, *Street Crime, Corporate Crime, and the Contingency of Criminal Liability*, 149 U. PA. L. REV. 1295, 1298 (2001) ("Criminal law is a comparatively minor tool for addressing white-collar wrongdoing. For street wrongdoing, in contrast, criminal law remains the dominant instrument."). Pre-Guidelines surveys of judicial attitudes towards white-collar criminals identified several reasons that judges were disinclined to impose prison sentences on them: the feeling that such offenders were "punished enough" by the process of indictment, trial, and conviction; the belief that such offenders were especially sensitive to imprisonment; the desire to prevent injuries to innocent third-parties; the desire to facilitate compensation of victims; and the attraction of non-incarcerative reparations. Kenneth Mann et al., *Sentencing the White Collar Offender*, in *CORPORATE AND WHITE-COLLAR CRIME: AN ANTHOLOGY* 197, 199-204 (Leonard Orland ed., 1995). However, despite its status as "conventional wisdom," the empirical research does not yet provide strong support for the proposition that white-collar criminals are treated leniently as a class. Shover, *supra* note 83, at 145; see also Michael M. O'Hear, *Blue-Collar Crimes/White-Collar Criminals: Sentencing Elite Athletes Who Commit Violent Crimes*, 12 MARQ. SPORTS L.J. 427, 437-46 (2001) (discussing reasons high-status defendants might be sentenced either more or less harshly than low-status defendants).

⁴¹⁵ Michelle D. St Amand & Edward Zamble, *Impact of Information About Sentencing Decisions on Public Attitudes Toward the Criminal Justice System*, 25 LAW & HUM. BEHAV. 515, 516, 525-26 (2001).

⁴¹⁶ See *supra* Part III.C.2.

V. CRITIQUE OF THE ENVIRONMENTAL SENTENCING GUIDELINES

The previous Part identified an apparent gap between environmental sentencing *law* and environmental sentencing *practice*. The environmental guidelines embody the governing law, but the sentencing court opts out of the guidelines (to a greater or lesser extent) in the nearly one-half of cases in which there is a departure. Moreover, the intent of the guidelines is to impose short periods of incarceration on environmental offenders, but only a small minority actually receives a term in prison. In short, there seems to be a discrepancy between the expectations of the Sentencing Commission sitting in Washington and the behavior of the front-line sentencing actors (district court judges and line prosecutors).

The gap between law and practice provides *prima facie* evidence that the guidelines do not succeed in distinguishing among environmental defendants in ways that make sense in the real world. After all, the front-line sentencing actors, with all of their experience and practical wisdom, do not seem to find the environmental guidelines especially helpful or appropriate in determining sentence lengths. The Commission itself has recognized the value of using real-world practices as a benchmark for the Guidelines: when drafting the Guidelines in the 1980s, the Commission relied heavily on data it collected regarding actual pre-Guidelines sentencing.⁴¹⁷ Unfortunately, the Commission was unable to do so for environmental crimes because, at the time it was drafting the original Guidelines, there had been relatively few environmental cases that had proceeded all the way to sentencing.⁴¹⁸

With a considerable body of environmental sentencing data now available, we can see that the Commission designed the environmental guidelines in ways that lack much currency with front-line sentencing actors. This Part explores the structural defects of the guidelines that may contribute to their lack of real-world appeal. After identifying these defects, this Part will next show that the appellate courts, in interpreting the environmental guidelines, have actually exacerbated the guidelines' weaknesses. Finally, this Part will consider whether the district courts

⁴¹⁷ Sharp & Shen, *supra* note 6, at 294. *But cf.* Marc L. Miller & Ronald F. Wright, *Your Cheatin' Heart(land): The Long Search for Administrative Sentencing Justice*, 2 BUFF. CRIM L. REV. 723, 727-28 (1999) (arguing that the Commission's claim that it attempted to "mirror" existing practices "became an oversimple account for a complex blend of strategies that produced the initial guidelines"). Relying on the legislative history to the Sentencing Reform Act, Professor Berman argues that Congress also valued judicial perspectives and wished for the development of a dialogue between the judiciary and the Commission, in which judicial departure decisions would be employed to help refine the Guidelines over time. Berman, *supra* note 332, at 98.

⁴¹⁸ Sharp & Shen, *supra* note 6, at 294.

have, in effect, “fixed” the problems of the guidelines and the appellate case law through their pattern of liberal downward departure.

A. FLAWS IN THE STRUCTURE OF THE ENVIRONMENTAL GUIDELINES

This Section parses the language of the environmental guidelines with a critical eye. In particular, this Section identifies three overarching problems with the guidelines: (1) they fail to identify any controlling purpose or principle; (2) they fail to recognize culpability factors relating to intent and legitimacy; and (3) while they devote considerably more attention to harm and dangerousness, they do not embody a coherent approach even as to these culpability factors.

1. An Absence of Explicit Principle

The environmental guidelines manifest one of the chief generic criticisms of the Federal Guidelines: they lack any explicit animating principle.⁴¹⁹ The environmental guidelines offer merely a laundry list of factual circumstances that, if present, have a particular effect on the defendant’s offense level. The guidelines are, at least on their face, unprincipled in two senses: (1) at a global level, they identify no purpose to be served by imposing a sentence on an environmental defendant;⁴²⁰ and (2) at a more specific level, they provide no clue as to why the particular factual circumstances that the sentencing court is required to consider have been deemed relevant by the Commission. The environmental guidelines are, to borrow a phrase from Professor Stith and Judge Cabranes, pure “administrative *diktats*.”⁴²¹

The Commission has drafted “application notes” to accompany the Guidelines. In theory, these notes might supply the otherwise missing principles. In reality, the environmental application notes (like a great many of the application notes found elsewhere in the Guidelines) are simply inscrutable. Consider, for instance, Subsection 2Q1.3(b)(4), which mandates a four-point increase in the offense level “[i]f the offense involved a discharge without a permit or in violation of a permit.”⁴²² The application note reads, in its entirety:

⁴¹⁹ For a summary of the general critique, see *supra* Part IV.A.

⁴²⁰ By contrast, the tax guidelines do provide a global purpose: “detering others from violating the tax laws is a primary consideration underlying these guidelines.” SENTENCING GUIDELINES, *supra* note 310, § 2T1, introductory cmt.

⁴²¹ Stith & Cabranes, *supra* note 321, at 1271.

⁴²² SENTENCING GUIDELINES, *supra* note 310, § 2Q1.3(b)(4).

Subsection (b)(4) applies where the offense involved violation of a permit, or where there was a failure to obtain a permit when one was required. Depending upon the nature and quantity of the substance involved and the risk associated with the offense, a departure of up to two levels in either direction may be warranted.⁴²³

The first sentence seems merely to be a restatement of the text of Subsection (b)(4) itself.⁴²⁴ The second sentence offers some unexpected flexibility in the application of the enhancement, but does not explain why “the nature and quantity of the substance involved and the risk associated with the offense” should be deemed relevant in determining the amount of a permit-violation enhancement. Nor does the application note address the question—which lacks any self-evident answer—of why a discharge in violation of a permit should be treated *per se* with much greater severity than the discharge of another toxic pollutant that did not happen to be subject to a government permitting regime.

The absence of clear animating principles gives raise to several overlapping concerns. At the most pragmatic level, judges and lawyers have little to aid them in resolving ambiguities in the environmental guidelines.⁴²⁵ (For instance, what sorts of permits count under Subsection (b)(4): just federally-mandated environmental permits, or some larger universe of permits?) Where judges might normally look to the purposes of a statute as a guide to interpretation,⁴²⁶ the purposes of the environmental guidelines are either hidden or nonexistent. In the absence of true guidance, the case law may develop in an incoherent fashion, potentially defeating any purposes that the Commission actually did have.⁴²⁷ At a more abstract level, defendants, victims, and the public at large are deprived of any assurance that the sentences imposed in environmental cases reflect a principled balancing of the many competing interests implicated by

⁴²³ *Id.* § 2Q1.3, cmt. n.7.

⁴²⁴ Yet, maddeningly, the language is varied in seemingly trivial ways. For instance, while Subsection (b)(4) refers to “discharge[s] without a permit,” the application note refers to “violation[s] of a permit.” Does this mean that the (b)(4) enhancement applies to any permit violation, whether or not there was a discharge? If so, why does (b)(4) itself not say as much? If not, why did the Commission omit the word “discharge” from the application note?

⁴²⁵ For a description of some of these ambiguities, see *infra* Part V.A.4.a.

⁴²⁶ See Michael M. O’Hear, *Statutory Interpretation and Direct Democracy: Lessons From the Drug Treatment Initiatives*, 40 HARV. J. ON LEGIS. 281, 298, 321 (2003) (defining “purposive” statutory interpretation and identifying purposive analysis as a common method used by courts interpreting ballot initiative texts).

⁴²⁷ For my argument that this is precisely what has happened with the jurisprudence of environmental sentencing, see *infra* Part V.B.

criminal punishment. The sentencing process thereby risks provoking unnecessary mistrust and resentment.⁴²⁸

2. *The Hidden Animating Principles*

While the environmental guidelines lack *explicit* principles, at least two *implicit* principles play a dominant role in the sentencing calculus. First, environmental defendants should be sentenced in proportion to the severity of the type of harm they have caused or threatened (the “harm principle”). Second, environmental defendants should be sentenced in proportion to the likelihood that their conduct would cause harm (the “dangerousness principle”). These two principles, of course, correspond to the second and third dimensions of culpability in Professor Gross’s schema.

Of the eleven factual variables made relevant by the environmental guidelines, at least eight focus squarely on matters of harm, dangerousness, or a combination of the two.⁴²⁹ For instance, the sentencing judge must increase the defendant’s offense level if the offense “resulted in a substantial likelihood of death or serious bodily injury”⁴³⁰—a provision clearly designed to impose stricter punishments for the most dangerous forms of environmental misconduct. Likewise, the sentencing judge must determine if the offense resulted in a disruption of public utilities, a community evacuation, or a cleanup requiring substantial expenditure.⁴³¹ These three aggravators follow the harm principle, requiring stricter punishment for conduct that has caused particular types of harm that are of special concern.

The actual-discharge and ongoing-discharge aggravators are also

⁴²⁸ For a similar argument with respect to the Guidelines as a whole, see Stith & Cabranes, *supra* note 321, at 1271-72. Professor Sunstein has defended the Commission’s approach as an example of what he terms an “incompletely theorized agreement.” Cass R. Sunstein, *Incompletely Theorized Agreements*, 108 HARV. L. REV. 1733, 1743-44 (1995). He argues that such approaches to legal decisionmaking facilitate the achievement of consensus and stability. CASS SUNSTEIN, *LEGAL REASONING AND POLITICAL CONFLICT* 5 (1996); Sunstein, *supra*, at 1744. However, Professor Rappaport has persuasively argued that Sunstein’s model fits poorly with the institutional realities of the Guidelines system. Rappaport, *supra* note 330, at 1108-13. He notes, “[T]he first fifteen years of the Commission’s existence have made one thing clear: Remaining silent on purposes does nothing to defuse political controversy over guideline decisions that conflict with public opinion.” *Id.* at 1111.

⁴²⁹ For a list of the eleven variables, see *supra* Part IV.B.1. The Commission has also made clear that the new hazmat aggravator is also based on the harm and dangerousness principles: the amendment was explicitly promulgated in order to address conduct that poses “an inherent risk to large populations.” See *supra* Part IV.B.4.

⁴³⁰ SENTENCING GUIDELINES, *supra* note 310, §§ 2Q1.2(b)(2), 2Q1.3(b)(2).

⁴³¹ *Id.* §§ 2Q1.2(b)(3), 2Q1.3(b)(3).

consistent with the harm and dangerousness principles. To be sure, a discharge into the environment is not a harm in and of itself, but it is a necessary predicate for any of the more significant types of environmental harm discussed earlier,⁴³² and so may function as a proxy for threatening or causing such types of harm. Likewise, where the defendant's conduct constitutes an actual unlawful discharge (as opposed to a pure paperwork violation), the conduct is more likely to bring about significant harm, and so may also be viewed as a proxy for dangerousness. Indeed, the application note for these aggravators focuses the sentencing calculus on harm and dangerousness with even greater clarity: "Depending upon the *harm* resulting from the emission, release, or discharge, the quantity and nature of the substance or pollutant, the duration of the offense and the *risk* associated with the violation, a departure of up to two levels in either direction . . . may be appropriate."⁴³³

Similarly, the toxicity aggravator may function as a proxy for harm or dangerousness. Moreover, the environmental guidelines' lone mitigator is also consistent with the harm principle, as a pure paperwork violation threatens no severe harm. Indeed, just three of the SOCs (knowing-endangerment, permit-violation, and no-permit) seem difficult to characterize as going chiefly to harm or dangerousness. These three SOCs will be discussed further in the next Section.

3. *The Missing Culpability Factors*

A sentencing scheme that is truly committed to proportionality should not stop at harm, but should also authorize sentencing judges to take into account the other two dimensions of culpability. Unexpected and unjustifiable sentences will otherwise result. For instance, without a consideration of intent, two defendants might be treated the same, even though one acted purposely to cause harm, while the other acted only negligently. Similarly, without legitimacy considerations, two defendants might be treated the same, even though one acted in reliance on a justifiable misunderstanding of the law, while the other acted in knowing defiance of the law.

Viewed from an intent- or legitimacy-based perspective, the environmental guidelines function crudely, at best, in making important distinctions among defendants.⁴³⁴ The guidelines include only one

⁴³² See *supra* Part II.C.1.a.

⁴³³ SENTENCING GUIDELINES, *supra* note 310, § 2Q1.2, cmt. n.5 (emphasis added); see also *id.* § 2Q1.3, cmt. n.4 (same language).

⁴³⁴ More generally, other commentators have also observed the tendency of the Federal Guidelines to disregard *mens rea*. See, e.g., Douglas A. Berman, *The Model Penal Code*

provision, the knowing-endangerment aggravator, that speaks clearly to intent. As a measure of intent, though, this provision fails along two separate dimensions. First, the aggravator addresses only one sort of knowing endangerment, i.e., knowing endangerment of the physical well-being of people. The provision does not increase penalties for defendants who violate the law with knowledge that they are creating other types of danger, such as danger to ecosystems, property, and the emotional well-being of people. Second, the aggravator does not distinguish among degrees of intent other than knowledge. Thus, the guidelines do not require stricter penalties for those who purposely endanger than for those who knowingly endanger. Likewise, the guidelines do not require stricter penalties for those who recklessly endanger than for those who negligently endanger.⁴³⁵

Meanwhile, the guidelines lack any provision that speaks in a clear, direct fashion to legitimacy.⁴³⁶ Of course, to the extent that the guidelines distinguish cases of aggravated harm or dangerousness, such cases are unlikely to give rise to compelling legitimacy claims; in that sense, the guidelines may indirectly reflect legitimacy considerations. Still, *victim* interests (embodied in harm and dangerousness) represent only part of the legitimacy equation; the guidelines largely ignore any legitimate interests served by the defendant's conduct.⁴³⁷

Second: Might "Film Schools" Be in Need of a Remake?, 1 OHIO ST. J. CRIM. L. 163, 166 (2003).

⁴³⁵ In addition to the knowing-endangerment aggravator, an application note also refers to intent considerations: "[T]his section assumes knowing conduct. In cases involving negligent conduct, a downward departure may be warranted." SENTENCING GUIDELINES, *supra* note 310, § 2Q1.2, cmt. n.4. Insofar as it rests on a distinction between "knowing" and "negligent" violations, the provision suffers an important ambiguity in the environmental context. If, for sentencing purposes, "knowing" is given the same meaning that it has in the substantive environmental criminal law, then it actually sweeps in much conduct that could properly be characterized as "negligent." See *supra* Part II.C.3. Thus, the scope of the authorized departure for "negligent" conduct is uncertain and may be considerably narrower than might first appear. Moreover, as a device for incorporating intent considerations into the environmental sentencing calculus, the application note suffers additional difficulties. For instance, the application note only distinguishes between two degrees of intent, making no mention of purposeful, reckless, or sub-negligent violations. Also, the authorized sentencing break for negligent misconduct is permitted ("may be warranted"), but not required.

⁴³⁶ See, e.g., *United States v. Bogas*, 920 F.2d 363, 367 (6th Cir. 1990) ("[N]o distinction is drawn [in the guidelines] between a case where the defendant actually caused the release and a case where he simply failed to report it.").

⁴³⁷ The gap may to a limited extent be addressed by the generic lesser harms departure. See SENTENCING GUIDELINES, *supra* note 310, § 5K2.11 (authorizing departures when the circumstances of the offense "significantly diminish society's interest in punishing the conduct"). However, judges are not required to adjust sentences on these grounds, and there

In seeking a provision that addresses legitimacy, the strongest candidate may be the permit-violation aggravator. Where a defendant has violated a permit (which should, in principle, be customized to his or her circumstances), the defendant is less likely to have misunderstood the governing legal requirements than if the defendant has violated a general regulation. Environmental permit-holders can participate in the drafting process of a permit and request modification if a permit does not address an unanticipated circumstance. By virtue of having obtained a permit, a permit-holder has demonstrated, at least *prima facie*, some degree of sophistication about the law and/or access to competent technical and legal advice. Finally, a permit-holder likely has an ongoing course of communications with regulators, through which the permit-holder can seek clarification of legal ambiguities. Yet, whatever legitimacy interests are furthered by the permit-violation enhancement, the effect is negated by the no-permit aggravator.⁴³⁸ The latter provision increases offense level by the same amount as violating a permit, thus erasing any *per se* sentencing distinction between those who hold permits and those who do not. Thus, the real distinction in the guidelines is between those whose activities are subject to a permitting regime and those whose activities are regulated otherwise—not a distinction that has any clear connection to culpability.⁴³⁹

4. *Why the Guidelines Fail Even on Their Own Terms*

While the Commission may have devoted more attention to the harm and dangerousness principles than to intent and legitimacy, it has failed to implement those principles effectively. Several concerns are highlighted below.

is no evidence that they have done so in environmental cases. See *supra* Part IV.D (discussing judicial explanations for departure).

⁴³⁸ SENTENCING GUIDELINES, *supra* note 310, §§ 2Q1.2(b)(4), 2Q1.3(b)(4).

⁴³⁹ In addition to legitimacy, the permit-violation aggravator may also reflect intent considerations. Where a defendant has obtained a permit for his or her activities, we may reasonably assume that the defendant is on notice that the government considers those activities to be, in some sense, dangerous. Given this assumption, a defendant's violation of a permit may be construed as a *knowing* creation of risk to others, and hence more culpable than an unknowing risk-creation. This theory, of course, requires a number of empirical assumptions that may or may not be supportable, for instance, that permit-holders are, by and large, on sufficiently greater notice of risk than non-permit-holders that the two groups may be categorically distinguished for culpability purposes. Moreover, to whatever intent interests are furthered by the permit-violation enhancement, the effect is negated by the no-permit aggravator.

a. Complexity

The environmental guidelines exhibit that same complexity that has been such a source of criticism of the Federal Guidelines generally.⁴⁴⁰ The environmental guidelines require fact-finding on as many as eleven separate variables that are specific to environmental crimes.⁴⁴¹ This fact-finding burden is in addition to the substantial volume of generic fact-finding (i.e., not limited to environmental cases) that judges must perform generally in the federal sentencing process (e.g., has the defendant accepted responsibility for the offense and what is the defendant's criminal history).⁴⁴² Indeed, because of its unfamiliarity, judges probably find the environmental-specific fact-finding significantly more burdensome than the generic fact-finding. On average, district court judges sentence an environmental defendant about once every six years;⁴⁴³ judges thus probably feel themselves wading into strange and forbidding morass each time such a case arises.

Exacerbating the complexity, the environmental guidelines employ criteria that are both technical and indeterminate.⁴⁴⁴ The guidelines are technical because they ask questions that cannot be answered without scientific and specialized environmental legal expertise. For instance, the toxicity aggravator enhances penalties for offenses involving "pesticides or substances designated toxic or hazardous at the time of the offense *by statute or regulation*."⁴⁴⁵ Yet, the precise scope of these designations is one of the most difficult and controversial aspects of environmental law; it has been said, for instance, that only a handful of EPA employees understand the meaning of "hazardous waste" in RCRA.⁴⁴⁶ And these legal judgments, in turn, may depend on scientific and engineering questions relating to such matters as the chemical composition of a substance, how it was generated, and how it was subsequently handled.⁴⁴⁷ Thus, within this one, facially straightforward issue of fact (was the substance toxic or otherwise hazardous?) may lurk daunting challenges for the sentencing judge. Other terms in the guidelines present similar difficulties.⁴⁴⁸

⁴⁴⁰ See *supra* Part IV.A.

⁴⁴¹ See *supra* Part IV.B.1.

⁴⁴² For a list of nine generic factual issues that are particularly common in environmental cases, see *supra* Part IV.B.2.

⁴⁴³ See *supra* Part IV.D.

⁴⁴⁴ For a discussion of these terms, see SCHUCK, *supra* note 105, at 4.

⁴⁴⁵ SENTENCING GUIDELINES, *supra* note 310, § 2Q1.2, cmt. n.3 (emphasis added).

⁴⁴⁶ See *supra* Part II.A.

⁴⁴⁷ Garrett, *supra* note 33, at 2-4.

⁴⁴⁸ To note just one more example of technicality, the enhancement for a "discharge, release, or emission" of a contaminant into the environment likewise invokes environmental

The guidelines are also in many respects indeterminate. When exactly does the likelihood of death or serious bodily injury become “substantial”?⁴⁴⁹ When is a cleanup expense “substantial”?⁴⁵⁰ When does a discharge qualify as “ongoing, continuous, or repetitive”?⁴⁵¹ These standards are not suggestive of simple, bright-line tests, but, rather, of context-sensitive judgments that require a weighing of diverse factual considerations. Moreover, departures authorized in the application notes operate in an even more indeterminate fashion than these defined enhancements: “Depending on the harm resulting from the emission, release, or discharge, the quantity and nature of the substance or pollutant, the duration of the offense and the risk associated with the violation, a departure of up to two levels in either direction . . . may be appropriate.”⁴⁵² This is not even a standard, but merely a laundry list of considerations that might be taken into account by a judge.⁴⁵³

Complexity imposes transactional and other costs, which will be elaborated in the next Part.⁴⁵⁴ To be sure, these costs do not necessarily mean that complexity should be rejected. Incremental complexity may enhance the overall proportionality of the sentencing scheme by taking more culpability considerations into account in a more nuanced fashion. Yet, in light of the costs, incremental complexity is not always desirable; the costs must be justified on the basis of the benefits created. Unfortunately, the complexity of the environmental guidelines does not seem especially well designed to achieve coherent, nuanced, and proportionate results.

law terms of art. *See, e.g.*, 33 U.S.C. § 1362(12) (2004) (defining “discharge of a pollutant”); 42 U.S.C. § 9601(22) (2004) (defining “release”). These legal terms, once mastered by the sentencing judge, may, in turn, lead to difficult scientific questions: what were the physical properties of the contaminant; what were the physical properties of the container or medium into which it was placed; what was the likely fate of the contaminants once placed there in light of geological, meteorological, and other circumstances.

⁴⁴⁹ SENTENCING GUIDELINES, *supra* note 310, §§ 2Q1.2(b)(2), 2Q1.3(b)(2).

⁴⁵⁰ *Id.* §§ 2Q1.2(b)(3), 2Q1.3(b)(3).

⁴⁵¹ *Id.* §§ 2Q1.2(b)(1)(A), 2Q1.3(b)(1)(A).

⁴⁵² *Id.* § 2Q1.2, cmt. n.5; *see also id.* § 2Q1.3, cmt. n.4 (same language).

⁴⁵³ *See also id.* § 2Q1.2, cmt. n.6 (“Depending on the nature of the risk created and the number of people placed at risk, a departure . . . may be warranted.”); *id.* § 2Q1.2, cmt. n.7 (“Depending upon the nature of the contamination involved, a departure . . . could be warranted.”); *id.* § 2Q1.2, cmt. n.8 (“Depending upon the nature and quantity of the substance involved and the risk associated with the offense, a departure . . . may be warranted.”).

⁴⁵⁴ *See discussion infra* at Part VI.A.

b. No Global Assessment of Harm and Dangerousness

While the environmental guidelines are evidently most concerned with harm and dangerousness, they do not anywhere ask judges to make a global assessment of these culpability factors. Instead, the guidelines ask judges to find facts relating to existence of particular *types* of harm (e.g., cleanup costs), or of certain circumstances that might serve as *proxies* for dangerousness (e.g., whether there has been an ongoing discharge). This approach is in keeping with the general tendency of the Federal Guidelines to require judges to answer focused, nominally objective questions, in lieu of broader questions that implicate relatively subjective value judgments. (Indeed, this is an important part of what is meant by the criticism that the Guidelines are unprincipled.)⁴⁵⁵ This approach, however, runs into particular difficulties in the environmental context, where the types of potential harm and the degree of risk are so varied from case to case, from imminent bodily injury to speculative long-term ecological injury.⁴⁵⁶

More specifically, the Commission's piecemeal approach to harm presents two risks: first, that some quite dangerous conduct will fall between the cracks because the Commission has not thought to create an applicable aggravator; and, second, that some mildly dangerous conduct will be treated with unwarranted harshness because it happens to trigger several overlapping aggravators in ways not anticipated by the Commission. The first problem (which will also be discussed from a different angle in the next Section) is nicely illustrated by the debate over the new hazmat aggravator. In defending the proposed aggravator, DOJ argued that, in the absence of an actual discharge, the unlawful

⁴⁵⁵ For a summary of this criticism, see *supra* Part IV.A. See also Gerard E. Lynch, *The Sentencing Guidelines as a Not-So-Model Penal Code*, 7 FED. SENTENCING REP. 112 (1994) (“[T]he guidelines have turned gradations of culpability on rather crude quantifiable factors.”).

⁴⁵⁶ The guidelines' crabbed approach to risk assessment seems particularly odd in the environmental context, where there is an unusually rich tradition of theoretical inquiry into risk assessment. For an overview of this tradition, see STEELE, *supra* note 246, at 159-99. Indeed, environmental practitioners are well-acquainted with the methods of quantitative risk assessment (“QRA”), which typically expresses risk in terms of either numbers of expected fatalities over a given time period or the probability of a single individual dying in a given period of time. See *id.* at 164 (defining QRA). Given its ubiquity elsewhere in the environmental field, the absence of QRA from the environmental sentencing calculus may strike some as a bit odd. There are doubts, however, about the reliability of QRA. *Id.* at 166. Moreover, public perceptions of the gravity of risk seem to depend as much on the qualitative aspects of the risk as the quantitative. *Id.* at 167. In light of these concerns, as well as the complexity costs that would be entailed by incorporating rigorous QRA into the sentencing process, my proposal for guidelines reform employs broad risk categories that are largely defined in qualitative terms. See *infra* Appendix A.

transportation of hazardous materials would not normally trigger any of the aggravating SOCs, even though the conduct might actually be quite dangerous to the public.⁴⁵⁷ In effect, DOJ claimed that the conduct fell between the cracks of the existing regime. Yet, as opponents of the aggravator noted, it is not hard to identify many other types of similarly dangerous conduct that fall through the cracks now, and would still fall through the cracks even with a hazmat aggravator.⁴⁵⁸ Of course, there may come a day when the Commission has finally patched all of the cracks, but we may then be left with a set of environmental guidelines of considerably more daunting complexity even than those we have now.

Moreover, the ad hoc patching only increases the risk of the second type of problem: unwarranted harshness due to the interplay of overlapping aggravators. Consider the example of a one-time non-toxic discharge in violation of a permit that results in the need for substantial cleanup expenditures, but does not create any real likelihood of physical injury. Because the one act triggers several aggravators simultaneously, the defendant would have an offense level of 18. This *exceeds* the minimum offense level of 17 for defendants whose conduct results in a substantial likelihood of *death*. If asked to make a holistic assessment of dangerousness, we would expect judges to ensure that defendants who put lives in imminent peril would receive far stricter sentences than defendants who merely risked property damage, but the guidelines provide little room for such determinations.⁴⁵⁹

c. Undervaluing Some Harms

The environmental guidelines explicitly address certain types of harm, but not others. Using the categories discussed earlier in the taxonomy of environmental harm,⁴⁶⁰ the guidelines increase offense level based on threatened physical injury to people,⁴⁶¹ certain types of disruption of social and economic activities (i.e., disruption of a public utility and evacuation of

⁴⁵⁷ Uhlmann Testimony, *supra* note 373.

⁴⁵⁸ Testimony of Ronald A. Sarachan Before the U.S. Sentencing Comm'n (Mar. 17, 2004).

⁴⁵⁹ The lack of a global assessment also misses the possibility that the defendant's sentence should be mitigated because the defendant's conduct was actually beneficial to the environment. Some have suggested that the prosecution of John Pozsgai may represent such a case. Cohen, *Theory*, *supra* note 6, at 1101. Pozsgai was convicted of filling in a wetland and received a twenty-seven-month sentence, despite undisputed evidence that an adjacent stream ran cleaner as a result of the defendant's landfill. *Id.*

⁴⁶⁰ See *supra* Part II.C.1.a.

⁴⁶¹ SENTENCING GUIDELINES, *supra* note 310, §§ 2Q1.2(b)(2), 2Q1.3(b)(2).

a community),⁴⁶² and incurrence of remediation costs.⁴⁶³ Other categories of harm are neglected. Perhaps most notably, the guidelines do not require sentence enhancement for ecological damage, no matter how extensive. Nor do the guidelines enhance sentences for a range of socioeconomic disruptions (e.g., disruption of a business enterprise that is not a utility), property damage that is not remediated, or fear of future injury.⁴⁶⁴

In effect, the guidelines value some harms more than others. In one respect, the guidelines are justified in doing so: few would probably disagree with the decision to impose stricter penalties when death or serious bodily injury is threatened than when ecological or property damage is threatened. Yet, in other respects, the guidelines' implicit value scale seems arbitrary. Why, for instance, should remediated property damage be treated any differently than unremediated? Why should the evacuation of a community be regarded as more serious than damage to the natural environment?⁴⁶⁵ Why should disruption of a public utility be treated as more serious than disruption of any other public agency or private enterprise? In the absence of any apparent justification for such distinctions, the guidelines seem to undervalue important categories of harm.

To be sure, the guidelines may get at some of these harms indirectly. The actual-discharge, ongoing-discharge, and toxicity aggravators are presumably justified based on the risk that such activities will cause ecological and other types of harm not otherwise counted in the guidelines calculus. However, this does not cure the disparity in the treatment of the harms. A defendant whose illegal discharge disrupts a utility still gets treated more strictly than a defendant whose illegal discharge causes ecological devastation. The undervaluing of ecological and other harms persists, at least in a relative sense.

d. Disregard of Scale

Even as to harms that are counted, the guidelines fail to distinguish effectively based on the degree of harm. The guidelines treat harms in a

⁴⁶² *Id.* §§ 2Q1.2(b)(3), 2Q1.3(b)(3).

⁴⁶³ *Id.*

⁴⁶⁴ Some of these gaps may be filled through the departure mechanism. *See, e.g., id.* §§ 5K2.3, 5K2.5, 5K2.7 (authorizing departures for extreme psychological injury, property damage or loss, and disruption of government functions). However, judges are not required to adjust sentences on these grounds.

⁴⁶⁵ *See Bowman, supra* note 170, at 13 (arguing that traditional emphasis in law on human over environmental damage has "served largely to insulate polluters from responsibility for the consequences of their actions and to confirm the traditional perception of the environment as a free resource ripe for plunder").

binary sense: either they are present or not. For instance, consider four defendants whose conduct results in four different levels of cleanup expense: \$500, \$50,000, \$500,000, and \$50 million. The guidelines require an enhancement for any of these defendants who have caused a "substantial expenditure."⁴⁶⁶ It is unclear where the line of "substantiality" should be drawn, but some courts have suggested a figure as low as \$58,000.⁴⁶⁷ By that measure, though, the \$500 and \$50,000 expenditures would be treated the same (i.e., no enhancement), as would the \$500,000 and \$50 million expenditures. This binary system does not provide for distinctions that seem rather important.⁴⁶⁸

Similarly, the actual-discharge aggravator does not distinguish based on volume: the same enhancement applies whether a defendant has discharged a thimbleful of contaminants or a tanker-truck-full.⁴⁶⁹ The separate enhancement for "ongoing, continuous, or repetitive" discharges may have volume distinctions in mind,⁴⁷⁰ but serves as a poor proxy. Under this provision, several separate thimbleful discharges would be treated more strictly than a single discharge of thousands of gallons of the same toxic substance.

To be sure, the guidelines authorize departures so as to provide greater flexibility in distinguishing among defendants based on scale. For instance, as noted above, the application note for the actual-discharge enhancement provides: "Depending on the harm resulting from the emission, release, or discharge, the quantity and nature of the substance or pollutant, the duration of the offense and the risk associated with the violation, a departure of up to two levels in either direction . . . may be appropriate."⁴⁷¹ Thus, while the actual-discharge enhancement provides in general for a four-level increase, a high-volume discharge may result in as much as a six-level increase, while a low-volume discharge might receive as little as a two-level increase. Why the departure is limited to two levels in either direction is unclear. Moreover, judges are not required to depart based on such considerations; it

⁴⁶⁶ SENTENCING GUIDELINES, *supra* note 310, §§ 2Q1.2(b)(3), 2Q1.3(b)(3).

⁴⁶⁷ *United States v. Chau*, 293 F.3d 96, 100 (3d Cir. 2002).

⁴⁶⁸ Analogous criticisms may be made with respect to nearly all of the environmental aggravators. For instance, the guidelines increase the offense level if the defendant has mishandled a hazardous or toxic substance, SENTENCING GUIDELINES, *supra* note 310, § 2Q1.2, but the guidelines make no explicit distinction between mildly and highly toxic substances. Moreover, EPA's decision to regulate a substance as hazardous or toxic cannot be regarded as a reliable indicator of the substance's relative dangerousness. *See, e.g.*, BREYER, *supra* note 103, at 11, 20 (discussing tendency of EPA to regulate low-level health risks, sometimes in lieu of more serious health risks).

⁴⁶⁹ SENTENCING GUIDELINES, *supra* note 310, §§ 2Q1.2(b)(1)(A), 2Q1.3(b)(1)(A).

⁴⁷⁰ *Id.* §§ 2Q1.2(b)(1)(B), 2Q1.3(b)(1)(B).

⁴⁷¹ *Id.* § 2Q1.2, cmt. n.5 (emphasis added); *see also id.* § 2Q1.3, cmt. n.4 (same language).

is merely an option for them. Nor are judges provided with any standard or baseline: how is a court to know when it is faced with an aggravated discharge, and when it is faced with a mitigated discharge? In short, while the guidelines offer a mechanism that might be used to address the problem of scale, there is little reason to believe that the mechanism is employed in a consistent, even-handed manner across cases.

e. Threatened Versus Actual Harm

Paralleling the failure to distinguish effectively based on degree, the guidelines do not effectively handle the distinction between threatened and actual harm. At the most basic level, the problem is one of consistency. On the one hand, the guidelines penalize for the *actual occurrence* of some harms (disruption of a public utility, evacuation of a community, expensive cleanup), but not for the threat of those same harms, no matter how imminent. On the other hand, the guidelines penalize the *mere threat* of death or serious bodily injury, without mandating additional punishment if the threat actually comes to pass. In short, the guidelines sometimes focus on actual occurrence and ignore mere threat, while elsewhere taking precisely the opposite position.

Of particular concern are the provisions that penalize actual occurrence. This approach produces odd disparities among defendants that do not fairly reflect actual culpability. Consider two defendants, Lucky and Unlucky. Lucky illegally disposes of hazardous waste contained in old, corroded 55-gallon drums by leaving them piled in an open field, where they are exposed to the elements and almost certain to leak. However, the drums are discovered almost immediately, quite by accident, and cleanup requires merely transporting the still-intact drums to an appropriate disposal facility. Unlucky, by contrast, disposes an equal number of drums of the same waste in an enclosed concrete bunker, such that environmental contamination is highly unlikely in the foreseeable future. Yet, the occurrence of a once-in-a-lifetime flood immediately compromises the bunker's integrity and results in the need for an expensive cleanup operation. The guidelines would mandate a considerably longer sentence for Unlucky than for Lucky, even though Lucky's conduct was much more dangerous.

From a culpability standpoint, the underlying problem is that punishing actual harm effectively punishes a defendant for circumstances beyond his or her control (like the unfortunate flood). While this approach may make sense for a *compensation* scheme—Unlucky should perhaps be made to *finance* the cleanup to the best of his ability—the approach is far

more problematic in a culpability-based *punishment* scheme.⁴⁷² To be sure, there is a lively theoretical debate over the question as to whether the actual infliction of harm increases a defendant's culpability in comparison with a mere attempt to inflict harm.⁴⁷³ Yet, with respect to some categories of harm, the guidelines have taken the odd position of incrementally punishing *only* the actual occurrence of the harm, no matter how freakish, and never the threat of harm, no matter how imminent.⁴⁷⁴

f. Public Opinion Research

Public opinion research supports a conclusion that the environmental guidelines do not reflect community views of blameworthiness and proportionality. In 1994, Professors Rossi and Berk oversaw an ambitious attempt to determine public opinion as to sentence length for a wide range of federal crimes.⁴⁷⁵ Their study involved face-to-face interviews of 1,737 adults across the country, in which the interviewees were asked their views on punishment in connection with forty-two different hypothetical fact patterns. While only a few of the vignettes involved environmental crimes, the responses to the environmental vignettes consistently indicated that the guidelines produce harsher results than the public would.⁴⁷⁶ For instance, a toxic discharge that would result in a guidelines sentence of about *eight* years yielded a median sentence of only *two* years in the Rossi and Berk study.⁴⁷⁷ Likewise, a discharge of hot water into a stream produced a sizeable disparity between the guidelines (2.5 years) and the survey respondents (0.7 years).⁴⁷⁸ Such results suggest that the high downward departure rate in environmental cases may indeed be justified.

⁴⁷² See GROSS, *supra* note 84, at 433 (“[Criminal liability] ought always to be for conduct according to its culpability, and differences that the occurrence of harm might make—such as feelings to be assuaged, or injury to be compensation—never have a place in determining the extent of criminal liability.”).

⁴⁷³ See, e.g., MOORE, *supra* note 126, at 194-96 (describing minority and majority positions within the academy).

⁴⁷⁴ Even “objectivists,” who would base criminal liability on harm, rather than intent, recognize the imposition of an imminent risk of danger as itself a sufficient harm to give rise to liability. See, e.g., Lawrence Crocker, *Justice in Criminal Liability: Decriminalizing Harmless Attempts*, 53 OHIO ST. L.J. 1057, 1063 (1992).

⁴⁷⁵ ROSSI & BERK, *supra* note 156.

⁴⁷⁶ For a summary of the environmental results, see *id.* at 120-27.

⁴⁷⁷ *Id.* at 92.

⁴⁷⁸ *Id.* This comparison reflects median values. Based on the mean, sentences were closer together (2.8 versus 2.2), but with guidelines still producing the longer sentence. *Id.*

B. APPELLATE INTERPRETATION

The federal appellate courts have issued more than thirty published decisions interpreting provisions of the environmental guidelines. A list of the cases is provided in Appendix B. This Section offers the first systematic description and evaluation of the cases. First, the Section summarizes how the courts have interpreted the various aggravators that have been litigated at the appellate level, demonstrating that the courts have, almost without exception, chosen relatively more expansive interpretations of the aggravators whenever they have had an opportunity to do so. Second, the Section describes and critiques the general interpretive approach of the courts.

1. *Expansive Interpretation of Aggravators*

a. Actual-Discharge Aggravator

No SOC has generated more appellate litigation than the actual-discharge aggravator. The principle point of dispute centers on the meaning of certain “explanatory” language in the application notes. Specifically, the application notes indicate that the aggravator “assumes a discharge or emission into the environment resulting in *actual environmental contamination*.”⁴⁷⁹ Relying on this language, defendants have argued that the government cannot rely merely on evidence that a discharge occurred, but must instead produce evidence that the discharge had some durable, measurable effect on environmental quality.⁴⁸⁰

Courts have rejected the defendants’ interpretation with near uniformity.⁴⁸¹ In effect, the courts have held that evidence of *any* physical contact between the defendant’s contaminants and the environment triggers the aggravator, without regard to harm or dangerousness. For instance, in *United States v. Sellers*, the Fifth Circuit affirmed the district’s court use of the aggravator on the basis of evidence that the defendant had illegally dumped sixteen drums of paint waste on an embankment, and that *one* of the drums may have leaked for no more than one day before being discovered.⁴⁸² The aggravator did not require evidence as to either the

⁴⁷⁹ SENTENCING GUIDELINES, *supra* note 310, § 2Q1.2, cmt. n.5 (emphasis added); *see also id.* § 2Q1.3, cmt. n.4. (same language).

⁴⁸⁰ *See, e.g.*, *United States v. Sellers*, 926 F.2d 410, 417 (5th Cir. 1991).

⁴⁸¹ *See, e.g.*, *United States v. Cunningham*, 194 F.3d 1186, 1201-02 (11th Cir. 1999); *United States v. Liebman*, 40 F.3d 544, 550-51 (2d Cir. 1994); *United States v. Goldfaden*, 959 F.2d 1324, 1331 (5th Cir. 1992); *United States v. Bogas*, 920 F.2d 363, 367 (6th Cir. 1990).

⁴⁸² 926 F.2d 410, 418 (5th Cir. 1991).

volume or the fate of the leaked material. Indeed, the evidence (which suggested merely a *de minimis* discharge) was held insufficient even to require a downward departure.⁴⁸³

The Ninth Circuit is the only circuit that (arguably) takes a different approach, although, in practice, it is not clear that the difference actually matters. Perceptions of a circuit split arose from the Ninth Circuit's decision in *United States v. Ferrin*.⁴⁸⁴ In *Ferrin*, the defendant illegally dumped chemical wastes into a dumpster, but authorities intervened promptly and saved the dumpster from being picked up by trash collectors.⁴⁸⁵ In upholding the district court's refusal to apply the actual-discharge aggravator, the Ninth Circuit held that the aggravator "requires a showing that some amount of hazardous substance in fact contaminated the environment,"⁴⁸⁶ and that "owing to the fortuitous intervention of the authorities, there was no actual contamination" in Ferrin's case.⁴⁸⁷ Along the way, the court seemed to disagree with sweeping language in a Fifth Circuit opinion holding that "actual contamination" was not required.⁴⁸⁸

Yet, in almost the same breath that it suggested it was adopting a contrary approach, the *Ferrin* court seemed to define "actual contamination" in the same sort of *de minimis* terms that have been adopted by the other circuits:

Proof of environmental contamination does not necessarily require a full-blown scientific study. We see no reason why in most cases reasonable inferences from available evidence concerning the offense at issue would not suffice to support a conclusion that the illegal acts resulted in contamination. . . . Thus, a finding that the hazardous waste came into contact with land or water or was released into the air is the appropriate predicate for enhancement under [the actual-discharge aggravator]. Even a small amount of hazardous discharge may suffice for an upward adjustment. . . .⁴⁸⁹

To make its position clear, the court noted that the aggravator might still apply in Ferrin's case if the material from the open dumpster had released a hazardous substance into the air in the form of a gas.⁴⁹⁰ Moreover, the court cited and discussed *Sellers* without critical comment.⁴⁹¹ In short, even though the Ninth Circuit—unlike other circuits—insists on an

⁴⁸³ *Id.*

⁴⁸⁴ 994 F.2d 658 (9th Cir. 1993).

⁴⁸⁵ *Id.* at 660.

⁴⁸⁶ *Id.* at 663.

⁴⁸⁷ *Id.* at 664.

⁴⁸⁸ *Id.* at 663 (discussing *United States v. Goldfaden*, 959 F.2d 1324 (5th Cir. 1992)).

⁴⁸⁹ *Id.* at 664.

⁴⁹⁰ *Id.*

⁴⁹¹ *Id.* at 663.

“actual contamination” test for the aggravator, this test should by no means be seen as requiring proof of a durable or measurable environmental harm. Post-*Ferrin* cases from the Ninth Circuit support this interpretation.⁴⁹²

In addition to deciding which test to use for “actual discharge,” the courts have also addressed a number of more specific questions relating to the aggravator. For instance, the courts have decided that the aggravator covers discharges into a sewer system,⁴⁹³ suggesting a broad definition of the “environment.” Likewise, the aggravator has been held to cover discharges into an underground well.⁴⁹⁴ Courts have also indicated that, where there has been an actual discharge, but little real harm, downward departures on that basis may not exceed two levels.⁴⁹⁵

b. Ongoing-Discharge Aggravator

Just as the courts have developed a low for the actual-discharge aggravator, they have also made it easy for the government to show an ongoing, continuous, or repetitive discharge. In particular, courts have held that a “repetitive discharge” is any discharge that has been repeated even one time.⁴⁹⁶

The First Circuit’s decision in *United States v. Catucci* illustrates the true breadth of the aggravator.⁴⁹⁷ *Catucci* was convicted of illegally disposing of two PCB-containing transformers.⁴⁹⁸ More specifically, *Catucci* had arranged for a contractor to remove five transformers from a plant he owned, including the two that were contaminated.⁴⁹⁹ The contractor divided the five transformers into two loads for shipment to the dumpsite and assigned the two contaminated transformers to different loads, apparently as a matter of random chance.⁵⁰⁰ On the basis of these facts, the First Circuit upheld the district court’s use of the ongoing-discharge aggravator.⁵⁰¹ Thus, *Catucci* received a longer sentence because his contractor, unbeknownst to him, had randomly divided the two

⁴⁹² See, e.g., *United States v. Technic Serv., Inc.*, 314 F.3d 1031, 1042-43 (9th Cir. 2002); *United States v. Pearson*, 274 F.3d 1225, 1235 (9th Cir. 2001).

⁴⁹³ See, e.g., *United States v. Van Lobel Sels*, 198 F.3d 1161, 1165 (9th Cir. 1999).

⁴⁹⁴ *United States v. Overholt*, 307 F.3d 1231, 1257 (10th Cir. 2002).

⁴⁹⁵ See, e.g., *United States v. Kuhn*, 345 F.3d 431, 439-40 (6th Cir. 2003); *United States v. Rapanos*, 235 F.3d 256, 259-60 (6th Cir. 2000).

⁴⁹⁶ See, e.g., *United States v. Eidson*, 108 F.3d 1336, 1344 (11th Cir. 1997); *United States v. Catucci*, 55 F.3d 15, 18 (1st Cir. 1995).

⁴⁹⁷ 55 F.3d 15 (1st Cir. 1995).

⁴⁹⁸ *Id.* at 17.

⁴⁹⁹ *Id.*

⁵⁰⁰ *Id.*

⁵⁰¹ *Id.* at 18.

contaminated transformers into separate loads; had they been included in the same load, Catucci would not have received the ongoing-discharge aggravator. Yet, there seems no reason to believe that Catucci's conduct was one bit more dangerous, or otherwise more culpable, simply because the same quantity of waste was discharged on two occasions instead of one.

c. Cleanup Aggravator

Courts have likewise interpreted the cleanup aggravator broadly. While the guidelines increase offense levels for cleanups requiring a "substantial expenditure," the guidelines do not define what constitutes "substantial." However, courts have indicated that an expenditure as low as \$58,000 counts,⁵⁰² even though this is a paltry figure in the world of environmental remediation.⁵⁰³ Courts have also held defendants responsible for the entire cost of a cleanup operation, even though the defendant did not create the underlying contamination problem, but merely exacerbated a preexisting condition⁵⁰⁴ or failed to report the problem.⁵⁰⁵

d. Other Environmental SOCs

Other aggravators have been litigated at the appellate level less frequently, but the same pattern of expansive interpretation is still evident. For instance, the utilities-disruption aggravator has been held satisfied when a public utility suffered damages that were estimated to be as low as \$1,000 per month over a two-year period.⁵⁰⁶ Another court has explicitly held that the aggravator does not require "the expenditure of substantial sums of money" by the allegedly disrupted public utility.⁵⁰⁷ In that case, the aggravator was held to apply based chiefly on the fact that the defendant's discharges into a public sewer system had caused a water treatment plant to violate its CWA permit, even though there was no showing of financial loss and no attempt to quantify the harm.⁵⁰⁸

As to the physical-injury aggravator, the courts have not required any

⁵⁰² *United States v. Chau*, 293 F.3d 96, 100 (3d Cir. 2002). *But see United States v. Merino*, 190 F.3d 956, 958-59 (9th Cir. 1999) (rejecting aggravator for "mid-five figure cleanup").

⁵⁰³ *See Revesz & Stewart*, *supra* note 168, at 14 (noting that the average cleanup cost for sites on the National Priorities List exceeds \$30 million); *Sharp & Shen*, *supra* note 6, at 302 ("Even the initial investigation of a [hazardous waste site] may often cost several hundred thousand dollars.").

⁵⁰⁴ *United States v. Phillips*, 356 F.3d 1086, 1097 (9th Cir. 2004); *Chau*, 293 F.3d at 100.

⁵⁰⁵ *United States v. Bogas*, 920 F.2d 363, 369 (6th Cir. 1990).

⁵⁰⁶ *United States v. Wells Metal Finishing, Inc.*, 922 F.2d 54, 56-58 (1st Cir. 1991).

⁵⁰⁷ *United States v. Rutana*, 18 F.3d 363, 366 (6th Cir. 1994).

⁵⁰⁸ *Id.*

particular analytical rigor or quantification of the “substantial likelihood of death or serious bodily injury.” For instance, in *United States v. Dillon*, the aggravator was applied based on the defendant’s illegal storage of ignitable hazardous wastes.⁵⁰⁹ On appeal, the Tenth Circuit affirmed the sentence, even though the district court had not made any finding that a fire was substantially likely to occur at Dillon’s facility.⁵¹⁰ Likewise, in *United States v. Pearson*, an asbestos case, the Ninth Circuit affirmed the district court’s use of the aggravator based solely on the generic health hazards of asbestos; the Ninth Circuit did not consider any specific risks created by the defendant’s violations of the asbestos rules.⁵¹¹ The aggravator may be applied even though the “victims” were the defendant’s co-conspirators and even though the victims substantially exacerbated their risk of injury by smoking.⁵¹²

Meanwhile, the permit-violation aggravator applies not only when a defendant violates his or her own permit, but also when the defendant’s conduct causes a violation of a third-party’s permit.⁵¹³ However, in an unusual narrowing of the scope of an aggravator, the Third Circuit held that the “violation of a permit” does not include the violation of a city-issued permit that was not required under federal law.⁵¹⁴

e. Departures for Low Harm or Danger

While none of the environmental SOCs authorize the sentencing court to inquire broadly into harm or dangerousness, the sentencing court might, in principle, depart downward if the defendant’s conduct has been especially benign. Such departures might take one of two forms. First, as noted above, the court might depart downward by as much as two levels under the express authority of various application notes to the environmental guidelines.⁵¹⁵ As to these “guided departures,” the appellate courts have been quite deferential to the decisions of trial courts, and have failed to develop any standards to clarify when departures are appropriate. Thus, for instance, in *Sellers*, the Fifth Circuit affirmed the trial court’s refusal to depart, even though the defendant’s conduct was not shown to

⁵⁰⁹ 351 F.3d 1315, 1318 (10th Cir. 2003).

⁵¹⁰ *Id.*

⁵¹¹ 274 F.3d 1225, 1235 (9th Cir. 2001). *Pearson* might be contrasted with *United States v. Thorn*, another asbestos case, in which the government presented expert medical testimony as to likelihood of harm to the people exposed as a result of the defendant’s conduct. 317 F.3d 107, 115-16 (2d Cir. 2003).

⁵¹² *Thorn*, 317 F.3d at 118-19.

⁵¹³ *United States v. Cooper*, 173 F.3d 1192, 1201 (9th Cir. 1999).

⁵¹⁴ *United States v. Chau*, 293 F.3d 96, 103 (3d Cir. 2002).

⁵¹⁵ See *supra* Part IV.B.1.

have caused or threatened any measurable environmental harm.⁵¹⁶ Second, at least in principle, the court might depart downward by more than two levels pursuant to its general power to take into account mitigating circumstances not fully contemplated by the Commission in formulating the guidelines.⁵¹⁷ However, the appellate courts have categorically rejected this type of departure, holding that the Commission took harm considerations into account through the guided departures.⁵¹⁸

f. Evaluation

Faced with a choice between broad and narrow readings of the environmental aggravators, the appellate courts have nearly always chosen the more expansive reading.⁵¹⁹ As a result, the aggravators may be invoked in a wide range of cases, including those in which the defendant's conduct actually presents only a minimal degree of dangerousness and harm. The appellate cases, then, exacerbate the implicit tendency of the guidelines to undermine proportionality: the aggravators will be applied equally in cases that present vastly different levels of dangerousness and harm. For instance, interpreting the actual-discharge aggravator to cover any case in which contaminants come into physical contact with the environment means that a defendant's sentence may be increased based on the tiniest leak, no matter how insignificant from a harm standpoint. By contrast, adopting a more rigorous actual-contamination standard (as suggested by so many defendants) would focus the sentencing analysis on considerations that relate much more directly to culpability.

Why have the appellate courts adopted such expansive interpretations? Several possibilities suggest themselves. First, these interpretations may simply be the best interpretations, from the standpoint of the plain meaning of the guidelines and/or the intent of the drafters. Second, these interpretations might be results-oriented, reflecting a desire (say, for deterrence purposes) to be tough on crime generally, or to be tough on environmental crime specifically. Indeed, for judges concerned about the infrequency of environmental criminal prosecutions, tough sentences might be seen as a countermeasure to offset the effects of prosecutorial diffidence.

⁵¹⁶ *United States v. Sellers*, 926 F.2d 410, 418 (5th Cir. 1991); *see also United States v. Goldsmith*, 978 F.2d 643, 646 (11th Cir. 1992) (affirming district court's refusal to depart).

⁵¹⁷ SENTENCING GUIDELINES, *supra* note 310, § 5K2.

⁵¹⁸ *See, e.g., United States v. Kuhn*, 345 F.3d 431, 439-40 (6th Cir. 2003).

⁵¹⁹ The courts have chosen a more expansive interpretation of the aggravators in twenty-seven cases. By contrast, the courts have chosen a narrower interpretation in only four cases. *See Appendix B*. Some cases appear in both lists because they involve multiple guidelines issues.

The appellate decisions might also be results-oriented in a different sense: the appellate judges are persuaded that the specific defendants before them deserve lengthy sentences.

Third, the appellate decisions may reflect the lack of experience of many federal judges with environmental crimes: the judges may lack the perspective to see the real difference between major and minor environmental crimes. For instance, while an experienced environmental practitioner would not consider \$58,000 a substantial cleanup expense, judges may not appreciate the vast range of costs that might be necessitated by an environmental violation.

Fourth, the courts might be trying to minimize the need for technical scientific evidence and fact-finding. For instance, determining *whether* a leak occurred would not likely require expert testimony, but determining the *dangerousness* of a leak probably would. Indeed, we might see a broad simplification agenda in the consistent refusal of the courts to require precise quantification of harm and risk.

All of these factors may play a role to varying degrees. In the end, of course, the only direct evidence we have to explain why appellate courts do what they do lies in the opinions that they write. The next Section will describe the analytical process in those opinions.

2. Textualist Reading of the Guidelines

In interpreting the environmental guidelines, appellate courts overwhelmingly employ textualist, “plain meaning” approaches.⁵²⁰ By contrast, courts rarely employ a purposive approach, in which an interpretation would be chosen based on its consistency with the underlying purposes of the guidelines and, hence, its tendency to make the guidelines as a whole coherent and reasonable.⁵²¹ For instance, in *Ferrin*, the court interpreted the meaning of “contaminate” by reference to *Webster’s New Collegiate Dictionary*, and gave no consideration to the relationship

⁵²⁰ For a brief description of textualism and its chief competitors, see O’Hear, *Statutory Interpretation*, *supra* note 426, at 297-99.

⁵²¹ For a description of purposivism, see *id.* at 298. Purposive interpretation assumes that laws have been drafted by “reasonable legislators acting reasonably,” and strives to achieve coherence in the law. See Elizabeth Garrett, *Who Directs Direct Democracy?*, 4 U. CHI. L. SCH. ROUNDTABLE 17, 32 (1997).

Other commentators have made similar observations regarding the narrow textualism of appellate interpretation of the Guidelines. See, e.g., Berman, *supra* note 332, at 105 (“[R]ather than seeking to exercise their own independent judgment about just and fair punishments within the guideline regime, appellate judges have principally sought to ensure compliance with the Commission’s guideline determinations.”) (footnote omitted).

between contamination and culpability.⁵²² Likewise, in *Sellers* (the leaking drum case) and *Catucci* (the transformer disposal case) the courts resolved the aggravator issues in conclusory fashion, without any consideration of relative harm or dangerousness.⁵²³

The Tenth Circuit's decision in *United States v. Overholt* provides one of the few counterexamples.⁵²⁴ In *Overholt*, the defendant injected waste illegally into disposal wells 4000 feet below-ground.⁵²⁵ Application of the actual-discharge aggravator turned on whether the defendant's conduct constituted a discharge into the "environment." In addressing the meaning of "environment," the Tenth Circuit explicitly identified a purpose behind the aggravator: "The concern of § 2Q1.2(b)(1)(A) is harm to life from dangerous chemicals."⁵²⁶ The court then noted trial testimony indicating that discharges into injection wells might result in contamination of underground sources of drinking water, and on that basis held that an injection well is part of the "environment."⁵²⁷

Why aren't there more cases like *Overholt*, in which the court takes into account the underlying purposes of the environmental guidelines? This may, of course, be a matter of judicial philosophy: textualist judges regularly decry interpretive strategies that stray beyond plain meaning.⁵²⁸ Yet, not all judges are textualists.⁵²⁹ Another possible explanation lies in the Commission's failure to identify its purposes in the environmental guidelines. The guidelines do not invite purposive interpretation; indeed, their obscurity positively impedes any judicial effort to identify and advance their objectives. The appellate courts can perhaps be forgiven for disregarding proportionality in their interpretations, for the Commission has

⁵²² *United States v. Ferrin*, 994 F.2d 658, 664 (9th Cir. 1993).

⁵²³ *United States v. Catucci*, 55 F.3d 15, 18 (1st Cir. 1995); *United States v. Sellers*, 926 F.2d 410, 417-18 (5th Cir. 1991).

⁵²⁴ 307 F.3d 1231 (10th Cir. 2002).

⁵²⁵ *Id.* at 1256-57.

⁵²⁶ *Id.* at 1257.

⁵²⁷ *Id.*

⁵²⁸ *See, e.g., Bank One Chicago v. Midwest Bank & Trust Co.*, 516 U.S. 264, 279 (1996) (Scalia, J., concurring in part); *In re Sinclair*, 870 F.2d 1340, 1344 (7th Cir. 1989).

⁵²⁹ *See* O'Hear, *Statutory Interpretation*, *supra* note 426, at 297 (noting central place of intentionalism in Anglo-American legal tradition); Charles Tiefer, *The Reconceptualization of Legislative History in the Supreme Court*, 2000 WIS. L. REV. 205, 206-07 (describing recent resurgence of use of legislative history by Supreme Court, notwithstanding opposition of textualist justices).

not indicated in any coherent fashion what proportionality means in the environmental context.⁵³⁰

C. DISTRICT COURT APPLICATION

Thus far, this Part has suggested that the guidelines do a poor job of ensuring proportionality (i.e., that differences in sentences reflect real differences in culpability, and vice versa), and that the appellate courts have not ameliorated, but have actually exacerbated, the problem. Recalling the sentencing data discussed in the previous Part, though, one might question whether the district courts have “fixed” the problem through their liberal departure patterns. Specifically, the data indicate that courts are thinking about culpability in broad terms and not just mechanically applying the environmental SOCs. Moreover, I have already suggested that district court judges are probably, in general, reasonably good evaluators of relative culpability.⁵³¹ Whatever the formal flaws of sentencing law, if actual practices have been satisfactory, why bother changing the law? In response to the question, this Section identifies several reasons why we should not be satisfied with the legal status quo.

1. Lack of Transparency

A system characterized by a gap between law and practice is a system that lacks transparency. Such opacity is undesirable in a federal sentencing regime that was actually designed to bring about greater transparency than had existed in the old indeterminate sentencing regime.⁵³² Opacity impedes effective public review of, and deliberation about, criminal justice practices. Opacity may also give rise to suspicions of arbitrariness in the sentencing process, casting doubt on the very legitimacy of the criminal justice system.⁵³³ Indeed, reflecting this view, one prosecutor has charged that the environmental guidelines create a “sentencing lottery.”⁵³⁴

Lack of transparency is of particular concern in the environmental context, where so many critics have noted an important perception problem: that the regulated community believes itself subject to unjustifiably harsh

⁵³⁰ In a different context, Professor Rappaport has also argued that there is a link between the Guidelines’ lack of clear principles and sentencing disparity. Rappaport, *supra* note 330, at 1119.

⁵³¹ See *supra* Part IV.E; text accompanying note 415.

⁵³² Michael M. O’Hear, *Localization and Transparency in Sentencing: Reflections on the New Early Disposition Departure*, 27 *HAMLIN L. REV.* 357, 366-69 (2004).

⁵³³ *Id.* at 366-67.

⁵³⁴ Jane Barrett, *Sentencing Environmental Crimes Under the United States Sentencing Guidelines—A Sentencing Lottery*, 22 *ENVTL. L.* 1421 (1992).

criminal sanctions for low-culpability violations.⁵³⁵ Even assuming that *all* low-culpability violators who are prosecuted receive merely probationary sentences, there still may be real delegitimation, demoralization, and overdeterrence costs if the regulated community *perceives* a substantial risk of felony incarceration for inadvertent or purely technical violations. Such perceptions may exist if actual sentencing practices are not known, or not thought likely to continue.

Moreover, knowledge of *general* sentencing practices may provide insufficient reassurance if the regulated community is strongly risk-averse. Costs may be triggered by the mere possibility that a low-culpability violator could run into a sentencer who decides to apply the environmental guidelines literally, particularly in light of the fact that reversal on appeal is nearly impossible to obtain when the environmental aggravators are interpreted expansively and a departure is refused.⁵³⁶ Reform of the guidelines, so as to provide more explicit protection for low-culpability violators, would offer greater reassurance to the regulated community because the appellate courts would be more likely to act as a check on the idiosyncratic judge who imposes an inappropriately severe sentence.

2. *Inappropriate Lenience*

Some specialized environmental prosecutors contend that judges do not recognize truly harmful violations when they see them.⁵³⁷ I have suggested that this claim is probably overstated, but it should not be discounted entirely.⁵³⁸ After all, judges see few environmental criminal cases (about once every six years),⁵³⁹ and so may lack the background to assess the cases properly. The claim may find additional support in the surprising lenience reflected in the sentencing data. Additionally, the environmental guidelines themselves fail to focus judges on important categories of harm, most notably ecological harm.⁵⁴⁰

Reforming the guidelines may provide greater assurance of incarceration for high-culpability defendants at least in two respects. First, new guidelines might focus the sentencer on categories of harm that are currently neglected. Second, if new guidelines offered clearer principles, a

⁵³⁵ See sources *supra* note 287.

⁵³⁶ See *supra* Part V.B.1.e.

⁵³⁷ See *supra* Part IV.E.

⁵³⁸ See *supra* Part IV.E.

⁵³⁹ See *supra* Part IV.D.

⁵⁴⁰ See *supra* Part V.A.4.c.

more coherent structure, and less complexity, then they would have greater credibility with sentencers and likely prompt higher levels of adherence.⁵⁴¹

3. *Flaws in the Guided Departure Mechanism*

Much of the discretion that district court judges take advantage of in environmental cases comes from the system of guided departures established by the application notes. While the authorization of these departures gives judges some flexibility to consider culpability in a more holistic fashion, they ultimately provide only limited reassurance of proportionality. Indeed, the guided departures provide judges a level of discretion that is at once too much and too little.

First, to the extent that judges depart based on mitigated harm or dangerousness, such departures are made pursuant to the application note provisions stating, “[d]epending upon the harm resulting from the emission, release or discharge, the quantity and nature of the substance or pollutant, the duration of the offense and the risk associated with the violation, a departure of up to two levels in either direction . . . may be appropriate.”⁵⁴² However, the application notes do not provide any sort of standard or baseline to help guide a court in determining whether harm or dangerousness are sufficiently mitigated to merit a departure: the application notes offer merely a naked laundry list of factual considerations. Nor have the appellate courts offered any guidance in this area.⁵⁴³ Accordingly, there is little reason to believe that district court judges grant these departures in a consistent manner. Some judges may refuse to depart in cases of truly *de minimis* risk, while others may depart in cases of quite substantial risk.⁵⁴⁴

Second, while the guidelines and the appellate courts give sentencing judges broad discretion in deciding *whether* to depart, the *magnitude* of departure is subject to limitations that are both strict and arbitrary: the departure can only serve to diminish (but not erase) the upward effect of an aggravator. Indeed, the appellate courts have indicated that departures on the basis of harm or dangerousness *must* be limited to the constraints of the

⁵⁴¹ This point is developed further *infra* Part VI.A.

⁵⁴² SENTENCING GUIDELINES, *supra* note 310, § 2Q1.2, cmt. n.5; *see also id.* § 2Q1.3, cmt. n.4 (same language). While this language applies to the actual-discharge aggravator, the application notes include similar language as to the physical-injury, utilities-disruption, evacuation, cleanup, permit-violation, and no-permit aggravators. *Id.* § 2Q1.2, cmt. nn.6-8.

⁵⁴³ *See supra* Part V.B.1.e.

⁵⁴⁴ More generally, judges cannot be expected to be perfect embodiments of public views of culpability. *See* Wiley, *supra* note 237, at 1072 (“When deliberately insulated and elite judges try to intuit popular knowledge and opinion, the result can be highly unreliable.”).

application notes.⁵⁴⁵ Generally, this means that the departure can reduce what would otherwise be a four- or six-level increase by two levels.⁵⁴⁶ The total “benefit” the defendant receives is thus dependent on the number of aggravators present, which, as we have already seen, is itself a rather arbitrary matter.⁵⁴⁷ In any event, the departure can never fully offset an aggravator’s effects. For instance, in a case in which the defendant has caused a two-time *de minimis* discharge, the court could diminish the size of ongoing-discharge aggravator from six to four levels, but the net effect of the repeat discharge would still be a considerable increase in the defendant’s sentence—no matter how benign the discharges actually were.

Third, while a number of courts have departed because the defendant’s conduct was merely negligent,⁵⁴⁸ the application notes may nonetheless unduly discourage courts from departing based on a low-culpability state of mind. While the application notes authorize departure based on negligence, they contrast negligence with “knowing conduct.”⁵⁴⁹ As we have seen, “knowing” is a term of art in environmental criminal law, encompassing all conduct in which the defendant is aware that he or she is handling materials that are more hazardous than distilled water.⁵⁵⁰ To the extent that judges understand “knowing” to mean the same thing for sentencing purposes that it means for liability purposes, then judges might reasonably believe themselves precluded from departing based on levels of intent that would, in other contexts, be considered mere negligence.

4. Changes in the Law

To whatever extent past environmental sentencing practices have been satisfactory in the past, the law is in a state of flux right now in several important respects, raising a risk that practices may change substantially in the near future. First, as discussed above, *Blakely* may result in the Guidelines becoming merely advisory, or transfer some sentencing discretion from judges to juries.⁵⁵¹

Second, in the 2003 “Feeney Amendment,” Congress sought to

⁵⁴⁵ See *supra* Part V.B.1.e.

⁵⁴⁶ The nine-level increase called for by the physical-injury aggravator, however, may be reduced by three levels. SENTENCING GUIDELINES, *supra* note 310, § 2Q1.2, cmt. n.1.

⁵⁴⁷ See *supra* Part V.A.4.

⁵⁴⁸ See *supra* Part IV.D.

⁵⁴⁹ SENTENCING GUIDELINES, *supra* note 310, § 2Q1.2, cmt. n.4.

⁵⁵⁰ See *supra* Part II.C.3.

⁵⁵¹ See *supra* Part IV.C.

“substantially reduce[.]” the “incidence of downward departures.”⁵⁵² In order to do so, Congress, *inter alia*, changed the standard of appellate review of departures from abuse of discretion to *de novo*,⁵⁵³ increased the ability of Congress and the Attorney General to scrutinize (and criticize) the departure practices of individual judges,⁵⁵⁴ and imposed new requirements on DOJ to oppose departures “that are not supported by the facts and the law.”⁵⁵⁵ At this point, it is not yet clear what effect such provisions will have on actual sentencing practices, but there is a substantial risk that, whatever salutary effects the departure mechanism has achieved in environmental sentencing in the past, those effects may be disappearing.⁵⁵⁶

Third, the new hazmat aggravator, while not as likely to work a dramatic change in practice as *Blakely* and Feeney, may nonetheless exert some upward pressure on environmental sentences. Notably, the new aggravator does not include a guided-departure authorization, meaning that judges will have little flexibility in implementing the provision. Moreover, DOJ’s success in securing prompt adoption of the hazmat aggravator may encourage DOJ to lobby for additional new aggravators to plug other gaps in the guidelines, such as their failure to take into account ecological injury.

VI. REFORMING THE ENVIRONMENTAL SENTENCING GUIDELINES

This Part proposes a fundamental restructuring of the environmental guidelines, outlining seven principles that ought to guide reform: (1) the guidelines should avoid unwarranted complexity; (2) the guidelines should distinguish among defendants based chiefly on culpability; (3) the guidelines should mandate a broad inquiry into harm, dangerousness, and intent; (4) the guidelines should focus on threatened, not actual, harm; (5) the guidelines should treat legitimacy as a mitigating factor, but only in exceptional circumstances; (6) the guidelines should not provide a specific benefit for good conduct after the offense; and (7) the guidelines should permit alternatives to incarceration for minimally culpable offenders, but not for maximally culpable offenders. A specific reform proposal reflecting these principles is set forth as Appendix A.

⁵⁵² Prosecutorial Remedies and Tools Against the Exploitation of Children Today Act of 2003 (PROTECT Act), Pub. L. No. 108-21, § 401(m)(2)(A), 117 Stat. 650, 675 (2003).

⁵⁵³ *Id.* § 401(d)(2).

⁵⁵⁴ *Id.* § 401(h).

⁵⁵⁵ *Id.* § 401(l)(1)(A).

⁵⁵⁶ It is to be expected that the new hazmat aggravator will also put upward pressure on environmental sentences, although the magnitude of that effect is uncertain.

A. AVOIDING UNWARRANTED COMPLEXITY

Incremental complexity in the law may give rise to a variety of social costs.⁵⁵⁷ As discussed in an earlier Section, judges and other critics persistently characterize the Federal Guidelines as unduly complex, focusing particularly on the transaction costs of interpreting and applying the Guidelines.⁵⁵⁸ While important, transaction costs are not the only type of social cost imposed by the complexity of the Guidelines.⁵⁵⁹

First, as Professors Ruback and Wroblewski have argued, the proliferation of aggravators diminishes the *reliability* of sentencing decisions, that is to say, the tendency of the process to produce the same result if repeated.⁵⁶⁰ Sentencing factors tend to be defined in the Guidelines such that reasonable people may differ as to how they should be applied in particular cases.⁵⁶¹ Think, for instance, of the cleanup aggravator, with its reference to "substantial expenditure."⁵⁶² Such a factor, in isolation, would diminish the reliability of the sentencing decision, but the effect is much greater when other such factors are present. Indeed, the cumulative effect problem does not depend on the unreliability of any particular sentencing factor in isolation:

For example, if each of 5 decisions independently leading to a sentence recommendation (e.g., use of a weapon, degree of injury) had a reliability of .90, the final decision arguably could have a reliability as low as (.90)⁵ or .59. A reliability of .90 is considered good, whereas a reliability of .59 is not.⁵⁶³

Empirical studies of Guidelines application demonstrate that reliability is more than merely a theoretical concern. In one study, for instance, forty-six probation officers (who prepare sentencing recommendations for judges) were asked to read a drug distribution case and assign offense levels to each of the three defendants in the case.⁵⁶⁴ For the three defendants, the

⁵⁵⁷ For a description of four important dimensions of complexity in the law, see *supra* Part II.A.

⁵⁵⁸ See *supra* Part IV.A; see, e.g., Jon O. Newman, *Towards Guidelines Simplification*, 13 FED. SENTENCING REP. 56, 57 (2000) (discussing judicial time and effort that goes into applying Guidelines).

⁵⁵⁹ For a more thorough discussion of complexity's transaction costs, see SCHUCK, *supra* note 105, at 11-12.

⁵⁶⁰ R. Barry Ruback & Jonathan Wroblewski, *The Federal Sentencing Guidelines: Psychological and Policy Reasons for Simplification*, 7 PSYCHOL. PUB. POL'Y & L. 739, 764-65 (2001).

⁵⁶¹ *Id.* at 765.

⁵⁶² SENTENCING GUIDELINES, *supra* note 310, §§ 2Q1.2(b)(3), 2Q1.3(b)(3).

⁵⁶³ Ruback & Wroblewski, *supra* note 560, at 765-66.

⁵⁶⁴ *Id.* at 765 (discussing P.B. Lawrence & P.J. Hofer, *An Empirical Study of Relevant Conduct Guidelines*, 4 FED. SENTENCING REP. 330 (1992)).

assigned offense levels ranged from twenty-four to thirty-two, twenty to thirty-two, and sixteen to thirty-two.⁵⁶⁵ For the third defendant, this range represented a possibility of anywhere from two years to more than eleven years in prison, depending on who performed the Guidelines analysis.⁵⁶⁶ Such reliability problems, which are largely a function of complexity, defeat Congress's objective of avoiding "unwarranted sentencing disparities among defendants with similar records who have been found guilty of similar criminal conduct."⁵⁶⁷

Second, complexity diminishes the *motivation* of judges.⁵⁶⁸ Research from organizational psychology demonstrates that "professionals do not like to be told how to do their jobs, particularly by nonprofessionals," often causing detailed rules and procedures to be ignored by those charged with implementing them.⁵⁶⁹ As Ruback and Wroblewski argue, this dynamic of resentment plays an important role in federal sentencing: "Judges dislike their supervisors (i.e., Congress and the Sentencing Commission) specifying procedures for them as if they were hourly workers, not professionals."⁵⁷⁰ There should be little wonder that studies find circumvention of the Guidelines—i.e., the manipulation of fact-finding and charges of conviction to avoid imposition of a sentence required by the Guidelines—to be common,⁵⁷¹ while judges are said to be in a state of "rebellion" against the drug guidelines.⁵⁷²

Third, complexity gives rise to what Professor Schuck has termed *delegitimation costs*:

When rules are indeterminate, their precise meanings cannot be easily grasped, nor can their applications be readily predicted. Confusion and uncertainty follow. If the rules are technical, they will often be opaque to the common mind, common sense, common experience, and even common morality. Intelligible only to experts, the law is likely to mystify and alienate lay citizens whose intelligence it often seems designed to mock. When this Delphic law also emerges from an institutional black box that is itself dense and difficult to comprehend, its legitimacy—the sense of

⁵⁶⁵ *Id.*

⁵⁶⁶ *Id.* This range assumes the defendant had no prior record. *Id.*

⁵⁶⁷ 28 U.S.C. § 991(b)(1)(B) (2003).

⁵⁶⁸ Ruback & Wroblewski, *supra* note 560, at 768-69.

⁵⁶⁹ *Id.* at 768.

⁵⁷⁰ *Id.* at 768-69.

⁵⁷¹ Stephen J. Schulhofer & Ilene H. Nagel, *Plea Negotiations Under the Federal Sentencing Guidelines: Guideline Circumvention and Its Dynamics in the Post-Mistretta Period*, 91 NW. U. L. REV. 1284, 1285 (1997) (finding that Guidelines were circumvented in twenty to thirty-five percent of cases).

⁵⁷² See Frank O. Bowman, III & Michael Heise, *Quiet Rebellion II: An Empirical Analysis of Declining Federal Drug Sentences Including Data from the District Level*, 87 IOWA L. REV. 477, 479-80 (2002).

"oughtness" that the lawmakers hope will attach to it—is diminished. . . . Profound cynicism about and alienation from the legal system may result.⁵⁷³

To be sure, as Schuck himself observes, "these weighty objections to complexity would not necessarily be decisive in any particular situation. A simpler regime, after all, might be even worse."⁵⁷⁴ However, acknowledging the costs of complexity should cause us to shift the burden of proof in designing a set of legal rules: incremental complexity should be rejected unless it is clearly warranted by reference to important underlying objectives of the rules. In the context of the environmental guidelines, we should seek—all else being equal—to minimize the number of SOCs, the fineness of distinctions, the technicality of language, and the indeterminacy of standards. Ideally, the environmental guidelines would divide defendants into a relatively small number of categories, whose boundaries would be based on the few distinctions that are really most important to us and would be defined in clear, non-technical language. Additionally, bearing in mind Schuck's well-advised warning about "Delphic law,"⁵⁷⁵ as well as the odd turns taken by the case law interpreting the present guidelines,⁵⁷⁶ reformed environmental guidelines ought to reveal their purpose in explicit terms. What that purpose should be is the subject of the next Section.

But, first, we should consider the effect of *Blakely* on the complexity concerns. As discussed above, to the extent that *Blakely* applies to the federal system, two results are possible: either the jury will be given a role at sentencing or the Federal Guidelines will become merely advisory.⁵⁷⁷ Either way, there will still be good reasons to adhere to a presumption against incremental complexity in sentencing law. On the one hand, to the extent that the responsibility for fact-finding at sentencing shifts from judge to jury, the transaction costs of a technical, multifactor sentencing calculus would surely not diminish. Nor would the reliability concerns, as judges were replaced by jurors of widely varying ability, temperament, personal experience, and political values. While the dynamic of resentment between judges and the Commission might change, jurors, too, would likely become frustrated if asked to decide many technically complicated issues. On the other hand, if the Guidelines became advisory, complexity would still be a matter of concern, for non-binding Guidelines perceived as unduly complex

⁵⁷³ SCHUCK, *supra* note 105, at 13-14.

⁵⁷⁴ *Id.* at 14-15.

⁵⁷⁵ *Id.* at 14.

⁵⁷⁶ See *supra* Part V.B.5.

⁵⁷⁷ See *supra* Part IV.C.

are likely to be disregarded with even greater frequency than the Guidelines presently are.

B. FOCUSING ON CULPABILITY

The environmental guidelines should attempt to make sentence length proportionate to culpability. As discussed above, the culpability-based approach is typically associated with retribution, although proportionality (at least in its negative version) has also been endorsed by many critics of retribution.⁵⁷⁸ In any event, in the present context, the chief competitor to a culpability-based approach would likely be a deterrence-based approach. Other conventional purposes of criminal punishment (e.g., incapacitation and rehabilitation) have received scant attention in the academic literature and legislative history relating to environmental crime.⁵⁷⁹ The tendency to downplay these purposes may find some support in the remarkably low criminal history scores of environmental offenders.⁵⁸⁰ Thus, despite the infrequency of lengthy prison terms, there is no reason to believe that recidivism has been a particularly substantial problem for environmental offenders.

The debate between retribution and deterrence has, of course, been among the most vexed in all of criminal law theory.⁵⁸¹ I have no intention of joining the theoretical debate in a systematic way for present purposes; to do so would lead us rather far afield from the topic of environmental sentencing. Rather, this Section will make the case for proportionality in a pragmatic, contextual fashion. I hope to demonstrate that, whatever the generic merits of the retribution-deterrence debate, a culpability-based approach makes sense for environmental sentencing.⁵⁸² The appeal of culpability will be described first, and then the difficulties of deterrence.⁵⁸³

⁵⁷⁸ See *supra* Part II.B.1.

⁵⁷⁹ Moreover, rehabilitative objectives do not even fit comfortably within the Federal Guidelines framework. See Cassell, *supra* note 334, at 1020 (“[T]he determinate sentencing structure of the federal system implicitly rejects the idea that rehabilitation should determine the length of sentences.”); Hofer & Allenbaugh, *supra* note 330, at 55 (“[T]he Commission makes its priorities crystal clear: rehabilitation may never be pursued through probation at the expense of the other purposes of punishment.”).

⁵⁸⁰ See *supra* Part IV.D.

⁵⁸¹ See, e.g., Christopher, *supra* note 125 (responding to critique by retribution scholars of deterrence theory); Paul H. Robinson & John Darley, *The Role of Deterrence in the Formulation of Criminal Law Rules: At Its Worst When Doing Its Best*, 91 GEO. L.J. 949 (2003) (criticizing deterrence theory); Von Hirsch, *supra* note 126, at 666-67 (responding to criticisms of retributive approaches).

⁵⁸² The approach here is consistent the view of other scholars that the criminal justice system should not endorse a single purpose of punishment for all crimes, but, rather, should

1. *The Appeal of Culpability*

Theorists have offered a number of different justifications for culpability-based punishment.⁵⁸⁴ Of particular importance for present purposes, Robinson and Darley emphasize the connection between culpability-based punishment and the moral credibility of the criminal justice system.⁵⁸⁵ As summarized above, they contend that proportionality gives the system moral credibility, and thereby helps criminal law to function as an authoritative statement of social norms.⁵⁸⁶ Indeed, Robinson and Darley suggest that this moral credibility is most important with respect to conduct that is not obviously harmful: “[T]he law’s moral credibility is not needed to tell a person that murder, rape, or robbery is wrong. The criminal law’s influence as a moral authority has effect primarily at the borderline of criminal activity, where there may be some ambiguity as to whether the conduct really is wrong.”⁵⁸⁷ Regulatory offenses, such as environmental crimes, surely fall into this category.⁵⁸⁸ While we may hope that the people who handle regulated substances take seriously the legal requirements applicable to such substances, Robinson and Darley suggest

employ different purposes for different types of offenses and offenders. *See, e.g.*, Michael Tonry, *Intermediate Sanctions in Sentencing Guidelines*, 23 CRIME & JUST. 199, 247-48 (1998).

⁵⁸³ Despite the overlapping terminology, the issue addressed here (culpability versus deterrence for sentencing purposes) differs from an important ongoing debate in the environmental compliance literature: whether agencies should adopt the so-called “deterrence” or “cooperation” models of enforcement. *See generally* RECHTSCHAFFEN & MARKEL, *supra* note 72, at 213-87. Under the cooperation model, agencies should eschew formal enforcement and sanctioning as a means to secure compliance with the law, in favor of persuasion, technical assistance, and regulatory flexibility. *Id.* at 67-68. Ayres and Braithwaite have proposed a model of “responsive regulation” that is intended to incorporate elements of both approaches. *See* BRAITHWAITE, *supra* note 414, at 29-34. In any event, this Section does not deal with the question of what sorts of formal enforcement should be undertaken under what circumstances, but, rather, what principle ought to guide the imposition of punishment once formal criminal proceedings have reached the sentencing phase. However, some of the criticisms voiced here of the deterrence theory might also be cited in support of cooperative approaches. *See supra* Part VII.A.

⁵⁸⁴ *See supra* Part II.B.1. As even its critics concede, retribution is increasingly recognized as the dominant approach to punishment by academics, judges, and policymakers today. Christopher, *supra* note 125, at 846-47. For recent critical views of retribution, see Rubin, *supra* note 128; Whitman, *supra* note 336.

⁵⁸⁵ Robinson & Darley, *supra* note 124, at 457-58.

⁵⁸⁶ *See supra* Part II.B.1.

⁵⁸⁷ Robinson & Darley, *supra* note 124, at 475-76.

⁵⁸⁸ *See* Sussman, *supra* note 200, at 577 (“Because we are no longer addressing visible environmental problems, the public benefits derived from EPA actions are less obvious and more difficult to measure than they were in 1970.”).

that they are likely to do so only to the extent that the law is perceived as having moral credibility.

If the law has a good reputation, people are more likely to defer to its judgment. If it has a bad reputation, people are more likely to discount its prohibition as one more example of a criminal law focused on something other than imposing liability for wrongs that deserve condemnation.⁵⁸⁹

In addition to such theoretical justifications, culpability-based punishment is also supported by doctrinal considerations. This is important because when the Commission writes new guidelines, it does not do so on a blank slate, but operates within a statutory framework. Within that framework, Congress has explicitly authorized the Commission to take culpability into account when determining sentence lengths.⁵⁹⁰ And, indeed, the Commission indicated that proportionality (“sentencing through a system that imposes appropriately different sentences for criminal conduct of different severity”) was one of its chief objectives in drafting the Guidelines.⁵⁹¹ Thus, redesigning the environmental guidelines around culpability considerations would not represent a basic philosophical break with past Commission practice, or cause the environmental guidelines to fit awkwardly within the broader federal sentencing framework.⁵⁹²

Additional support for culpability-based punishment comes from the real-world practices of front-line sentencing actors. As indicated above, judges have often explained departures in environmental cases based on culpability considerations.⁵⁹³ Studies of pre-Guidelines environmental

⁵⁸⁹ Robinson & Darley, *supra* note 124, at 476. Professor Spence makes a similar point, drawing on recent empirical studies on compliance with legal rules. Spence, *supra* note 4, at 982-85.

⁵⁹⁰ For instance, Congress has directed as follows:

The Commission . . . shall consider whether the following matters, among others, have any relevance to the nature, extent, place of service, or other incidents of an appropriate sentence, and shall take them into account only to the extent that they do have relevance—

- (1) the grade of the offense;
- (2) the circumstances under which the offense was committed which mitigate or aggravate the seriousness of the offense;
- (3) the nature and degree of the harm caused by the offense, including whether it involved property, irreplaceable property, a person, a number of persons, or a breach of public trust;
- (4) the community view of the gravity of the offense

28 U.S.C.A. § 994(c) (West 1993 & Supp. 2004).

⁵⁹¹ SENTENCING GUIDELINES, *supra* note 310, § 1A1.1, ed. n.3.

⁵⁹² To be sure, Congress has also authorized the Commission to take deterrence into account, but deterrence has not played an especially influential a role in the crafting of the Guidelines as they now exist. Hofer & Allenbaugh, *supra* note 330, at 61-62.

⁵⁹³ See *supra* Part IV.D.

sentencing also found that judges emphasized culpability.⁵⁹⁴ Moreover, prosecutors care about culpability, too. Formal prosecutorial guidelines place culpability factors at the heart of the environmental charging calculus.⁵⁹⁵ Surveys of environmental prosecutors do likewise.⁵⁹⁶ This is not to say, of course, that judges and prosecutors *only* care about culpability, but it is to suggest that a culpability-based system would probably not be rejected by front-line sentencing actors as an alien system or a radical break from past practices.

2. *The Difficulties of Deterrence*

A deterrence-based approach assumes that potential environmental violators engage in a rational cost-benefit analysis when deciding whether or not to comply with the law, and seeks to realign the incentives in favor of compliance. Thus, punishment should be directly related to the expected benefit that a violator would receive from a violation, so as to remove that benefit.⁵⁹⁷ Punishment should also be directly related to the harm and danger; otherwise, the transaction costs of punishment may exceed the costs avoided through deterrence.⁵⁹⁸ Punishment should be inversely related to the expectation that it will be imposed, taking into account such factors as likelihood of detection and successful prosecution.⁵⁹⁹

⁵⁹⁴ Cohen, *Theory*, *supra* note 6, at 1086-87.

⁵⁹⁵ EPA's policy is to treat a matter as criminal to the extent that there is "environmental harm and culpable conduct." Reitze, *supra* note 4, at 16. The harm factor is evaluated based on actual harm to human health or the environment, the threatened harm from a release, the efforts to report a release, and the extent to which a release represents a trend or is the result of a common attitude within the regulated community. *Id.* The culpability factor is evaluated based on whether there is a history of repeated violations; deliberate misconduct; concealment of misconduct; falsification of records; tampering with monitoring or control equipment; or failure to have a necessary permit, license, manifest, or other required documentation. *Id.* at 16-17.

⁵⁹⁶ Rebovich, *supra* note 302, at 81-82.

⁵⁹⁷ STEVEN SHAVELL, FOUNDATIONS OF ECONOMIC ANALYSIS OF LAW 499 (2004).

⁵⁹⁸ *Id.* at 506-07. There is a question as to whether we should "conditionally deter" environmental violations, that is, only deter violations whose costs exceed the benefits. Cohen, *Theory*, *supra* note 6, at 1062-63. This has been the basic view of many law and economics scholars working in the tradition of Gary Becker's seminal work on the economics of crime and punishment, *Crime and Punishment*, 76 J. POL. ECON. 169 (1968). If, however, we believe that all violations should be unconditionally deterred—regardless of any resulting inefficiencies—then the violator's benefit should be predominate over the harm as the basis for penalty determination. Cohen, *Theory*, *supra* note 6, at 1062-63.

⁵⁹⁹ SHAVELL, *supra* note 597, at 505. The deterrence approach, at least as commonly presented in the law and economics tradition, would also take into account the defendant's assets: if the defendant's assets are small, then monetary sanctions are unlikely to deter because the defendant does not have enough to lose, and incarceration may be necessary. *Id.*

Deterrence has, of course, been subject to broad philosophical attack, particularly insofar as it seems to demean personhood by using people as a means to achieve criminal control ends, and insofar as it seems to justify punishment of the morally innocent.⁶⁰⁰ Additionally, recent empirical and theoretical scholarship suggests that the deterrence model employs an overly simplistic view of individual decisionmaking,⁶⁰¹ and, indeed, more broadly, casts doubt on the fundamental assumption that individuals act as rational utility-maximizers.⁶⁰² Rather than echoing these generic arguments, however, my critique will be more contextual.

A deterrence-based system would differ little from a culpability-based system with respect to violations that are easy to detect; in such cases, both systems would emphasize harm and dangerousness considerations at sentencing.⁶⁰³ The two systems would diverge most dramatically with respect to violations that are difficult to detect: here, there would be considerable upward pressure on sentences in the deterrence-based

at 510. In general, though, fines are typically preferred to incarceration as a sanction because the social costs of imposing the sanction are less. See Richard A. Posner, *Optimal Sentences for White Collar Criminals*, in CORPORATE AND WHITE-COLLAR CRIME: AN ANTHOLOGY 183, 183 (Leonard Orland ed., 1995) (“[T]he white-collar criminal as I have defined him should be punished only by monetary penalties.”).

⁶⁰⁰ Christopher, *supra* note 125, at 848. Professor Christopher argues, though, that retributivism is guilty of the same sins. *Id.* at 849-50.

⁶⁰¹ See, e.g., Neal Kumar Katyal, *Deterrence’s Difficulty*, 95 MICH. L. REV. 2385, 2470-75 (1997) (discussing consequences of substitution theory for standard crime deterrence model).

⁶⁰² See STEELE, *supra* note 246, at 180 (discussing argument “that individuals are not maximisers of preferences, nor indeed of anything at all. Rather, they are problem-solvers embracing a wide range of incommensurable values and with techniques at their disposal to make decisions between these in different circumstances.”). Note that casting doubt on the assumptions of rational decision-making embodied in the deterrence model is not the same thing as claiming that the criminal justice system lacks deterrent effect:

There seems little doubt that having a criminal justice system that punishes violators, as every organized society has, does have a deterrent effect; having a punishment system does deter. But accumulating evidence increasingly suggests that there is little added deterrent effect that can be derived from the manipulation of criminal law rules for the distribution of criminal liability and punishment within that system.

Robinson, *supra* note 137, at 7.

⁶⁰³ The systems might diverge in these cases if benefits from the violation were small relative to harm, as the small benefits might have a sentence-reducing effect in the deterrence-based system, but not (at least explicitly) in the culpability-based system. On the other hand, in cases in which harm far exceeds benefits, the violation is unlikely to be purposeful or knowing, and, hence, there would likely also be mitigation in the culpability-based system as a result of diminished *mens rea*. Moreover, there has been controversy as to whether benefit ought to be part of the sentencing calculus in a deterrence-based regime. See, e.g., Nagel & Swenson, *supra* note 6, at 220-21 (discussing debate within Commission).

system.⁶⁰⁴ Thus, the choice between culpability and deterrence is largely a question as to whether some difficult-to-detect violations should result in sentences that are substantially in excess of their blameworthiness.

The question has particular urgency in the environmental context, for there are great numbers of environmental violations that fall into the difficult-to-detect category. This difficulty stems from the absence of immediately identifiable victims. Environmental offenses may be pure paperwork violations. If there is a more substantial harm threatened, that harm is apt to be a risk of future injury, which may never actually come to pass. And, even if tangible injury does occur, the injury is apt to be distant in time and space from the violation, making it difficult to determine who was actually responsible. While agency inspections may help to uncover some violations even in the absence of a complaining victim, inspection resources are spread thin and notoriously inadequate.⁶⁰⁵

Thus, under the deterrence approach, the difficulty-of-detection factor ought to push environmental sentences upward. Moreover, it is most likely to do so in precisely those sorts of low-harm/low-danger cases that would result in short sentences in a pure culpability regime. For instance, Professor Cohen, working within the deterrence framework, has suggested that pure recordkeeping violations (which are difficult to detect, and hence unlikely to result in punishment) might require harsher sanctions than massive oil spills (which are relatively easy to detect).⁶⁰⁶

Even if not viewed as morally offensive on its face, this sort of counter-intuitive result (and, by implication, the deterrence-based approach more generally) should be rejected for at least three thoroughly pragmatic reasons. First, a system that imposes enormous penalties for low-culpability violations will not be enforced. Such a system will display the pathologies of what Professor Kahan has termed the "hard-shove" approach to modifying social norms.⁶⁰⁷ These effects occur when the law condemns a particular behavior more severely than do the people responsible for

⁶⁰⁴ Inflating sentences for difficult-to-detect crimes may be unnecessary if it is assumed that violators are highly risk-averse, i.e., if criminal penalties are feared so much that a rational polluter would not choose to commit violations that would produce even a tiny risk of prosecution. If such an assumption is made, then the practical differences between culpability- and deterrence-based approaches would largely dissipate, as would any justification for deviating from culpability-based approaches.

⁶⁰⁵ For instance, during a recent two-year period, among 600 heavily regulated facilities, there were on average only three CAA inspections, 2.4 CWA inspections, and 1.5 RCRA inspections per facility. Spence, *supra* note 4, at 968. For a scathing report on the inadequacy of inspections, see JOHN COEQUYT & RICHARD WILES, PRIME SUSPECTS: THE LAW BREAKING POLLUTERS AMERICA FAILS TO INSPECT (2000).

⁶⁰⁶ Cohen, *Theory*, *supra* note 6, at 1106.

⁶⁰⁷ Kahan, *supra* note 256, at 608.

enforcing the law. Drawing on examples such as efforts to crack down on rape, drunk driving, and domestic violence, Kahan has demonstrated that the “hard shove” does not work: “[P]olice grow more reluctant to arrest, prosecutors to charge, juries to convict, and judges to punish.”⁶⁰⁸ Indeed, the “hard shove” may be counterproductive: “For example, when a jury in a high profile case acquits a defendant charged with raping a woman who protested but who didn’t physically resist his advances, the verdict reaffirms the vitality of the norm that ‘no sometimes means yes,’ and thus perpetuates behavior consistent with the norm.”⁶⁰⁹

Second, to whatever extent the system is enforced, disproportionate sentences for low-level offenses will compromise the moral credibility of the environmental regulatory regime. This is of particular concern in light of the special need, noted in the previous Section, for *environmental* criminal law to have moral credibility because it punishes non-obvious harms. As Robinson and Darley have suggested, disproportionately severe sentences may have the perverse effect of *reducing* compliance rates by weakening the norm of deferring to the law.⁶¹⁰

Third, a growing body of empirical evidence casts doubt on the “deterability” of the sorts of low-level, technical environmental violations that would be particularly targeted in the deterrence-based approach. The assumption of deterability rests on the model of the “rational polluter,” carefully toting up costs and benefits when deciding whether or not to comply with the law.⁶¹¹ The rational polluter model founders on the realities of environmental regulation described above: pollution is inevitable and pervasive; environmental laws are aspirational to the point of

⁶⁰⁸ *Id.* at 607-08; *see also* Brown, *supra* note 412, at 1302 (discussing responses in black communities to increasingly punitive criminal justice policies, including jury nullification and noncooperation with police investigators); Mann, *supra* note 414, at 201 (discussing surveys of judicial attitudes towards sentencing white-collar criminals that have found a reluctance to impose prison terms for deterrence purposes alone). Similarly, Professor Vandenberg has observed a similar tendency towards non-enforcement of environmental regulations that target individuals, rather than industrial polluters. Vandenberg, *supra* note 98, at 520.

⁶⁰⁹ Kahan, *supra* note 256, at 608.

⁶¹⁰ Robinson & Darley, *supra* note 124, at 467-68. Professor Spence expresses similar concerns for the threat that the rational polluter model poses for the legitimacy of the environmental regulatory system. Spence, *supra* note 4, at 978. He further argues that public perceptions of illegitimacy may threaten the political survival of the system. *Id.* at 979.

⁶¹¹ The deterrence approach may encounter similar problems in other areas of criminal law. *See* Robinson & Darley, *supra* note 581, at 951 (2003) (summarizing social science literature “showing that potential offenders do not know the law, do not make rational choices, or do not perceive an expected cost for a violation that outweighs the expected gain”).

being unrealistic in their expectations; and the law is extraordinarily complex.⁶¹² Thus, the vast majority of corporate environmental managers believe that perfect compliance is impossible.⁶¹³ Indeed, the complexities of the law are such that nearly half of corporate environmental managers report that their single most time-consuming duty is just determining whether their facilities are in compliance.⁶¹⁴

EPA's recent experience with an agency-industry partnership initiative, the Environmental Leadership Program ("ELP"), provides some validation of the views of corporate managers. Professor Spence describes the lessons of the ELP this way:

During the pilot phase of the ELP, audits were carefully planned in advance and designed to allow participating firms to demonstrate their sophisticated environmental management and auditing systems to the EPA. The audits included regulators and representatives of the firms, and each firm knew ahead of time when the audit would take place and had ample time to prepare. Nevertheless, in nearly every environmental audit performed under the ELP, violations were discovered. . . . [T]he important point is this: even with time to prepare and an incentive to perform well, these sophisticated firms did not achieve perfect compliance.⁶¹⁵

Other studies have reached similar conclusions that significant percentages of environmental violations are inadvertent.⁶¹⁶

Complementing these studies, much evidence suggests that corporate managers do, by and large—for reasons both high-minded and not—seek in good faith to comply with environmental regulations without regard to the magnitude of the expected sanctions for failure. This seems the best explanation for the levels of compliance that do occur.⁶¹⁷ The available data indicate that most firms are in compliance most of the time.⁶¹⁸ Yet, many studies suggest that the expected cost of noncompliance is very small.⁶¹⁹ Violations are difficult to detect, and the median fine is only a few thousand dollars.⁶²⁰ Thus, under the rational polluter model, it makes little sense for firms to devote the considerable resources they put into good

⁶¹² See *supra* Part II.A.

⁶¹³ Spence, *supra* note 4, at 931.

⁶¹⁴ *Id.*

⁶¹⁵ *Id.* at 975.

⁶¹⁶ *Id.* at 972-73, 976; John Brehm & James T. Hamilton, *Noncompliance in Environmental Reporting: Are Violators Ignorant, or Evasive, of the Law?*, 40 AM. J. POL. SCI. 444 (1996).

⁶¹⁷ Spence, *supra* note 4, at 974.

⁶¹⁸ *Id.* at 966-67.

⁶¹⁹ *Id.* at 967-68.

⁶²⁰ *Id.* at 968.

environmental performance, including adopting programs that are actually intended to go beyond what the law requires, as many have.⁶²¹ Rather, real-world firm behavior generally seems consistent with the view that corporate managers have internalized the norms embodied in environmental regulations (or at least the more general norm of obeying the law, whether or not the law is agreed with), and attempt in good faith to comply with those regulations.⁶²² If this is true, then it is unclear what additional compliance would be achieved by increasing penalties for low-level violations.⁶²³ Indeed, for the reasons suggested above, such an approach might actually undermine the norm-internalization that has already occurred.⁶²⁴

3. Summary

For purposes of the environmental guidelines, the choice between a culpability- and a deterrence-based approach matters the most for that broad category of violations that are either purely technical or that create intangible or speculative injuries. As to such violations, the difficulty-of-

⁶²¹ *Id.* at 967-68.

⁶²² *Id.* at 970. Defenders of the rational polluter model may respond that polluters comply because they overestimate the risks of getting caught, or the likely severity of sanctions if they are caught. This argument presents a paradox, though. As Professor Spence puts it, “[The rational polluter] model assumes that while firms cannot accurately measure the probability that a violation will be detected, they can understand the labyrinth of changing regulatory requirements. These are, at the very least, difficult claims to reconcile.” *Id.* at 974.

⁶²³ Not surprisingly, studies both inside and outside the environmental area have found little effect from the size of sanctions on compliance rates. Michael P. Vandenberg, *Beyond Elegance: A Testable Typology of Social Norms in Corporate Environmental Compliance*, 22 STAN. ENVTL. L.J. 55, 125-26 (2003). For instance, one study of oil facilities found no measurable effect from magnitude of penalties on oil spill size or frequency. *Id.* at 125. Another recent comparative study of paper mills in jurisdictions with varying approaches to environmental enforcement (deterrence-based and cooperative) found no consistent relationship between environmental performance and the use of deterrence-based approaches. Robert A. Kagan et al., *Explaining Environmental Performance: How Does Regulation Matter?*, 37 LAW & SOC’Y REV. 51, 61-66 (2003).

⁶²⁴ This is not to say that compliance with environmental standards is necessarily a purely selfless decision. For instance, superior environmental performance may reduce production costs, offer public relations benefits, or please investors. RECHTSCHAFFEN & MARKEL, *supra* note 72, at 219-21. Moreover, a widespread desire to comply with the law does not imply universal (or even widespread) agreement with all of the substantive requirements of the law. *Id.* at 217 (“There is no question that many businesses remain philosophically opposed to some substantial portion of the current regime of environmental regulation and indeed consider it illegitimate.”). The views of some members of the regulated community may be illustrated by the concerted efforts they made to reduce the stringency of environmental regulations in the mid-1990s. *Id.* at 218.

detection factor would systematically inflate sentences beyond culpability-based standards.⁶²⁵ Many of these violations, however, are inadvertent, and hence nondeterrable. As to the remainder, longer deterrence-based sentences would diminish the moral credibility of the environmental regulatory system and thereby possibly undermine the ultimate objective of encouraging environmental compliance. This approach would also seem to contradict the preferences of sentencing judges, who frequently reduce environmental sentences based on culpability considerations, but who have not identified purely deterrence-based considerations as grounds for departure.

Retributivists, of course, will not need to be persuaded of the advantages of culpability-based environmental guidelines. I hope that these arguments will persuade the utilitarians, though, that, whatever general reservations they have about a culpability-based approach, such an approach is particularly well-suited for the environmental context, where the moral credibility of the law is particularly important because the underlying harms are not obvious; where the substantive law does an especially poor job of distinguishing among offenders based on culpability, leaving the task to the sentencing process; where so many violations are difficult to detect, and hence likely to produce especially wide gaps between culpability- and deterrence-based approaches; where so many violations are inadvertent, and hence undeterrable; and where sentencing data suggests an existing judicial emphasis on culpability.

C. MANDATING A BROAD INQUIRY INTO HARM, DANGEROUSNESS, AND INTENT

The environmental guidelines should invite sentencing courts to undertake a broad inquiry into harm, dangerousness, and intent. Put differently, the guidelines should avoid the piecemeal approach that is currently used, which combines a determination of whether certain specific types of harm have occurred (e.g., utilities disruption, community evacuation) with an assessment of broader proxies for harm and dangerousness (e.g., actual discharge). As discussed above, the current piecemeal approach misses many important considerations.⁶²⁶ While, in theory, it might be possible to plug all of the holes, guidelines revised along those lines would likely be unacceptable for two reasons: they would be unduly complicated and they would pose great risks for double-counting as

⁶²⁵ The inflationary effect might be mitigated in some cases by the low harm; a truly utilitarian approach would want to avoid sanctions in very low harm cases for fear of overdeterrence of socially beneficial violations. See Cohen, *Theory*, *supra* note 6, at 1102.

⁶²⁶ See *supra* Part V.A.

harm categories interacted in unanticipated ways.⁶²⁷ The guidelines could avoid these problems by asking the sentencing judge three general questions, rather than the current set of eleven specific questions: (1) what was the magnitude of the harm that was caused or threatened by the defendant's conduct; (2) what was the likelihood that this harm would occur; and (3) what was the defendant's state of mind with respect to the harm?

Additional support for this approach comes from norm activation theory, which suggests that "a norm's influence on behavior is affected by the intensity of the obligation felt by the individual."⁶²⁸ A feeling of obligation to comply with a norm may be triggered by an awareness of the adverse consequences to others of violating the norm and an ascription of personal responsibility for causing or preventing those consequences.⁶²⁹ For example, in one study, individuals who were aware of the human health effects of burning yard waste and accepted responsibility for it were less likely to burn such waste than others.⁶³⁰ In light of such findings, Professor Vandenberg has criticized the tendency of environmental enforcers to focus on statistics (e.g., dollars in penalties, quantity of pollutants prevented from being released into the environment) that do not speak directly to the health benefits of environmental compliance.⁶³¹ He suggests that enforcement actions are more likely to trigger compliance norms if compliance is linked to tangible social benefits. The environmental sentencing approach advocated here may help, for the nature and scale of threatened harm would become the centerpiece of the sentencing calculus, in lieu of the various proxies for harm (like the occurrence of a discharge) that now dominate the analysis. Defendants would be forced to consider the consequences of their actions, and (in high-profile cases) press reports on the sentencing process would help to publicize the sorts of health and environmental risks that may be created by environmental violations.

One might object that the broad inquiry into culpability is too subjective, thereby giving sentencers too much discretion and creating too much unwarranted disparity in the treatment of similarly situated defendants. Such concerns might be mitigated by careful redrafting of the application notes. At present, the application notes provide little real guidance to sentencing judges,⁶³² but there is no reason that the application

⁶²⁷ See *supra* Part V.A.4.b.

⁶²⁸ Vandenberg, *supra* note 623, at 73.

⁶²⁹ *Id.*

⁶³⁰ *Id.* at 73-74 n.53.

⁶³¹ *Id.* at 91.

⁶³² See *supra* Part V.A.1.

notes could not be used to describe with some specificity the factual considerations that courts ought generally to consider in environmental cases. Indeed, the application notes might offer detailed factual scenarios to serve as benchmarks for aggravated and mitigated culpability cases. While such specific guidance would likely suffer from the same sorts of gaps that plague the existing guidelines, the approach described here has one major advantage over the existing system: the application notes would be explicitly nonbinding, permitting judges to fix the gaps in light of the big-picture culpability assessment. The application notes would only be there as a resource to help conscientious judges implement the environmental guidelines in a manner that is as objective and consistent across cases as possible.

The appellate courts might also contribute to consistency. At present, the appellate jurisprudence does not exhibit particular coherence, but, as suggested above, the difficulties may stem from the guidelines' lack of explicit principles.⁶³³ Given an explicit focus on culpability, the appellate courts may develop a sort of common law of environmental sentencing, clarifying the boundaries of new environmental guidelines in an incremental, case-by-case fashion that is informed by the particulars of real-world cases.⁶³⁴ This process, too, may contribute to greater sentencing consistency.

Moreover, it should be clear by now that the piecemeal approach lacks the ability to deliver the consistency that it promises. Even if one makes the heroic assumption that the environmental guidelines could be rewritten so as to minimize the risk of arbitrary under- and over-counting of harms, the complexity of the resulting guidelines would undercut the reliability of the sentencing process.⁶³⁵ Thus, the piecemeal approach creates, at best, an illusion of sentencing consistency.⁶³⁶ It is preferable to ask sentencers a smaller number of more general questions.⁶³⁷

D. EMPHASIZING THREATENED, NOT ACTUAL, HARM

The environmental guidelines should focus on threatened, not actual, harm. There is a lively debate among culpability theorists as to whether

⁶³³ See *supra* Part V.B.2.

⁶³⁴ See Berman, *supra* note 332, at 94.

⁶³⁵ See *supra* Part VI.A.

⁶³⁶ Cf. Newman, *supra* note 558, at 57 (arguing that, in light of complexity, current fraud guidelines create "an illusion of precision divorced from reality").

⁶³⁷ Such questions must be, to some extent, indeterminate, and thus they raise complexity concerns of their own. This complexity, however, is justified because the alternative system (many specific questions) is also complex in its own way, and suffers additional weaknesses in the form of risks of under- and over-counting harms.

(and, if so, under what circumstances) the defendant who merely intends to harm should be treated any differently than the defendant who actually does harm. Most theorists have taken the position that the occurrence of a threatened harm should not necessarily result in a more severe punishment,⁶³⁸ with particular concern that otherwise the degree of punishment would turn on matters of pure chance that are beyond the defendant's control.⁶³⁹

In addition to the theoretical objection, there is also a practical objection to taking actual harm into account in this context: the problem of causation. Environmental violations produce injuries that typically do not become fully manifest until years, or even decades, after the violation—much too late for sentencing purposes. To the extent that injuries are apparent at the time of sentencing, those injuries may be quite difficult to connect causally to the underlying violation. In short, measuring actual harm is apt to be an extraordinarily speculative business, and not worth the complexity costs of doing on a systematic or routine basis.⁶⁴⁰ Departures may be available for exceptional cases.⁶⁴¹

⁶³⁸ See, e.g., MOORE, *supra* note 126, at 194-96 (describing minority and majority positions within the academy as to whether the actual infliction of harm increases a defendant's culpability in comparison with a mere attempt to inflict harm); Stephen J. Schulhofer, *Harm and Punishment: A Critique of Emphasis on the Results of Conduct in the Criminal Law*, 122 U. PA. L. REV. 1497, 1606 (1974) (concluding that "emphasis on results appears justifiable only in a very limited number of areas"). For an argument in favor of actual harm, noting that courts have generally rejected the academics' view, see Loewy, *supra* note 86, at 289-90. The Robinson and Darley study of community views of culpability likewise finds that "liability and punishment judgments are highly influenced by whether harm or evil occurs." ROBINSON & DARLEY, *supra* note 139, at 28. However, this conclusion is qualified by the requirement that there be a sufficiently strong causal connection between the conduct and the harm. *Id.* at 159, 188-89 ("Our results did clearly suggest . . . that the extent of a person's liability is reduced as the result becomes more 'remote or accidental' in relation to the person's conduct."). The unique causation issues in the environmental context, to be noted shortly, may thus provide a basis for treating environmental crimes differently than other crimes with respect to actual harm.

⁶³⁹ Recall, for instance, the example of Lucky and Unlucky provided *supra* in Part V.A.4.e. See also Crocker, *supra* note 126, at 1082 (arguing that defendant should not be held fully accountable for "consequences that are radically worse than expected").

⁶⁴⁰ Indeed, the difficulty of determining environmental injuries in a timely fashion was a principle reason that the Commission chose not to extend the generic corporate sentencing guidelines to environmental crimes. Nagel & Swenson, *supra* note 6, at 256.

⁶⁴¹ See, e.g., SENTENCING GUIDELINES, *supra* note 310, §§ 5K2.3, 5K2.5, 5K2.7 (authorizing departures for extreme psychological injury, property damage or loss, and disruption of government functions).

E. TAKING LEGITIMACY INTO ACCOUNT

While legitimacy is properly considered an important element of the defendant's culpability, assessing legitimacy in the sentencing context raises a number of concerns that are not raised (or not raised to the same degree) by the other dimensions of culpability. The interest-balancing analysis is particularly fraught with subjectivity, and thus especially prone to inconsistent results. Moreover, in light of the politically charged nature of many of the interests implicated by environmental regulation,⁶⁴² decisions as to legitimacy are apt to be especially controversial. By taking positions on these issues, courts may diminish, rather than enhance, their moral credibility, thus undermining one of the chief objectives of the culpability-based approach. For this reason, it is not surprising that judges do not appear to have given explicit weight to legitimacy considerations in their departure decisions. Finally, given the potential for a sizeable array of competing interests to be assessed, the legitimacy dimension may raise particularly acute complexity concerns.

In light of these concerns, legitimacy should play at most a secondary role in the sentencing calculus, coming into play only in exceptional cases. Indeed, legitimacy-based sentence reductions might appropriately be limited to cases in which the magnitude of the harm risked is minimal, for it is unlikely in other cases that the interests supporting the defendant's conduct will decisively outweigh the countervailing interests. On the other hand, in such low-harm cases, the possibility of mitigation based on justifiable mistake of law should not be foreclosed. Even recognizing the lack of social consensus as to many environmental values, there seems no good reason to view a largely technical violation based on a mistake of law as anything but minimally culpable.

F. TAKING POST-VIOLATION CONDUCT INTO ACCOUNT

Culpability analysis focuses on the offense conduct, including the circumstances and (at least arguably) the consequences of the conduct. However, it does not directly take into account the defendant's post-offense conduct. Yet, there is no question that the defendant's good conduct after the offense (e.g., voluntary reporting or cleanup of unlawful discharges) has been taken into account in mitigating sentences, both as a general matter of

⁶⁴² See *supra* Part II.C.4.b; see also Nagel & Swenson, *supra* note 6, at 258 (describing political contentious of environmental sentencing issues and suggesting that division of opinion in this area may be uniquely profound in comparison with other areas of criminal law).

sentencing law⁶⁴³ and as a matter of environmental sentencing practice.⁶⁴⁴ Indeed, environmental prosecution guidelines explicitly identify voluntary remediation efforts as an important consideration in the decision about whether to pursue a violation criminally.⁶⁴⁵

There are at least two particularly strong reasons to take good post-offense conduct into account in sentencing environmental crimes. First, because violations are so hard to detect, there may be especially good reasons to encourage voluntary reporting of environmental violations. Second, because it may take a long time for environmental violations to produce harm, timely reporting and remediation efforts may help to prevent or minimize injuries.

Despite such considerations, post-offense good conduct should not be given an explicit role in reformed environmental guidelines. General provisions of the Federal Guidelines already reward good conduct and penalize bad conduct. Indeed, these general provisions may operate with particular force in the environmental area. For instance, if Brickey is correct that prosecuted environmental crimes typically involve multiple defendants,⁶⁴⁶ then environmental defendants will routinely have good opportunities for sentencing discounts by providing substantial assistance to the authorities.⁶⁴⁷ Likewise, the copious environmental reporting requirements already put pressure on defendants to disclose unlawful releases; otherwise, they face the possibility of sentence enhancement under the Guidelines for obstruction of justice⁶⁴⁸ or conviction for the separate crimes of obstruction⁶⁴⁹ and/or false statement.⁶⁵⁰

Moreover, business entities are subject to their own sentencing

⁶⁴³ See, e.g., SENTENCING GUIDELINES, *supra* note 310, §§ 3E1.1(b), 5K1.1 (providing for sentence reductions if the defendant enters a guilty plea early enough to save the government the burden of preparing for trial or if the defendant assists the authorities in the investigation or prosecution of another person).

⁶⁴⁴ Cohen, *Theory*, *supra* note 6, at 1087.

⁶⁴⁵ Reitze, *supra* note 4, at 16-17; see also Donald J. Rebovich, *Environmental Crime Prosecution at the County Level*, in ENVIRONMENTAL CRIME: ENFORCEMENT, POLICY, AND SOCIAL RESPONSIBILITY 205, 222 (Mary Clifford, ed., 1998) ("A move to remediate is likely to be in exchange for a dropping, or lowering, of criminal charges."). In addition to the prosecution guidelines, EPA's audit policy also encourages company's to monitor, report, and address violations. Under this policy, EPA offers reduced monetary penalties and a promise not to prosecute criminally violations that are promptly disclosed and corrected. RECHTSCHAFFEN & MARKEL, *supra* note 72, at 163-64. Many states offer even more generous audit privileges and immunities. *Id.* at 156-60.

⁶⁴⁶ Brickey, *Charging Practices*, *supra* note 4, at 1122.

⁶⁴⁷ See SENTENCING GUIDELINES, *supra* note 310, § 5K1.1.

⁶⁴⁸ See *id.* § 3C1.1.

⁶⁴⁹ See 18 U.S.C. § 1503 (2004).

⁶⁵⁰ See *id.* § 1001.

guidelines, which explicitly provide benefits for self-reporting and for adopting effective programs to prevent and detect violations.⁶⁵¹ Thus, to the extent that an individual's environmental violation also subjects a business to criminal liability, the business has its own set of incentives to ensure good post-offense conduct. Additionally, in the interests of minimizing civil liability,⁶⁵² negative publicity,⁶⁵³ the threat of criminal prosecution,⁶⁵⁴ criminal restitution,⁶⁵⁵ criminal fines,⁶⁵⁶ and the possibility of sentence enhancement based on actual harm,⁶⁵⁷ defendants already have an incentive to contain illegal discharges and otherwise take steps to minimize any threat to human health or the environment.

In light of these sorts of considerations, it is far from clear that including additional incentives in the environmental guidelines would add materially to the overall strength of the incentives for good post-offense conduct.⁶⁵⁸ Such additional incentive provisions would, however, increase the complexity of the environmental guidelines. Another concern should also lead us to reject such provisions: sentencing benefits for remedial action tend to benefit wealthy defendants disproportionately. After all, environmental remediation is a notoriously expensive endeavor, and many defendants will be simply unable to afford it.⁶⁵⁹ Indeed, environmental

⁶⁵¹ See SENTENCING GUIDELINES, *supra* note 310, §§ 8C2.5(f)-(g).

⁶⁵² See, e.g., 42 U.S.C. § 9607(a) (2003) (describing categories of civilly liable parties for releases of hazardous substances).

⁶⁵³ For a more complete description of the noncriminal sanctions that an organization might suffer as a result of environmental violations, see Cohen, *supra* note 23, at 240-43. See also Wiley, *supra* note 237, at 1082-83 (describing "modern four-layered safety incentive system" that makes strict criminal liability unnecessary as a tool to protect the public from harm).

⁶⁵⁴ As noted earlier in this Section, prosecutors take post-offense conduct into account when making charging decisions.

⁶⁵⁵ See SENTENCING GUIDELINES, *supra* note 310, §§ 5E1.1, 8B1.1.

⁶⁵⁶ See *id.* §§ 5E1.2, 8C1.1.

⁶⁵⁷ Under my proposal, punishment would be tied less to actual harm than in the existing system, but offense level might still be increased based on actual harm in exceptional cases. See *supra* Part VI.D. Additionally, the sentencing court might take actual harm into account in the highly discretionary decision of sentencing within a specific range.

⁶⁵⁸ One veteran environmental attorney observes: "The most common corporate response to an environmental investigation is to cooperate with the government. Given the stigma and publicity associated with a protracted investigation and trial, the faintest hope of rapid and bearable resolution is often sufficient to induce a corporation to cooperate." Fein, *supra* note 254, at 104.

⁶⁵⁹ See RECHTSCHAFFEN & MARKEL, *supra* note 72, at 216 (noting studies showing that large firms are more likely to undertake voluntary actions than others).

criminal enforcement already faces controversy for its apparent tendency to target small businesses over big businesses.⁶⁶⁰

G. USING INCARCERATION APPROPRIATELY

The foregoing principles provide guidance on the *relative* ranking of environmental defendants, suggesting the criteria that should be employed to identify which environmental defendants should receive the most severe punishments. Establishing a relative ranking, though, leaves open the question of which specific punishments should be imposed on which defendants. If we only know that Defendant A should be punished more severely than Defendant B, that still leaves open the possibility that Defendant A could receive any sentence from a day in jail to the death penalty. Indeed, this uncertainty is precisely one of the chief criticisms of culpability-based proportionate sentencing schemes.⁶⁶¹ Because there is no precise way to translate “high” or “low” culpability into a specific number of years in prison, culpability-based approaches may seem somewhat arbitrary in practice.

While acknowledging the impossibility of scientific precision, a reasonably satisfactory system may nonetheless be developed, employing a variety of sources for insight into what constitutes a morally acceptable sentence for different levels of environmental offenses.⁶⁶² First, the

⁶⁶⁰ For examples of this criticism, see Firestone, *supra* note 4, at 158-59; Fortney, *supra* note 4, at 1632. Firestone has suggested a number of explanations for enforcers to focus on small firms. Firestone, *supra* note 4, at 133-34. For instance, he points out that “a violation committed by a large firm is more likely to be embedded deeply within the interior of the firm, making the identification of individuals with knowledge of the genesis of the violation and proof of culpable conduct difficult.” *Id.* at 133. Large firms may also be able to use their greater resources to exert some control over the enforcement process. *Id.* at 134.

⁶⁶¹ Christopher, *supra* note 125, at 892-93. *But see* Robinson, *supra* note 137:

[D]esert has quite specific demands, driven in large part by the demand of ordinal ranking. . . . Given the limited range of punishments a liberal democracy ought to be willing to inflict, distinguishing cases of distinguishable blameworthiness means that the deserved punishment in any given case will fall within a narrow range on the punishment continuum.

Robinson, *supra* note 137, at 10.

⁶⁶² *See* Robinson, *supra* note 137, at 13-14:

[I]n some respects, desert is more subject to definitive determination than any other distributive principle because one can with some precision determine at least what the members of the community governed by a criminal justice system think are the relevant factors, while it is very difficult to get reliable data on the most basic factors for non-desert purposes.

Id.; *see also* DUFF, *supra* note 126, at 138-39 (arguing in favor of “satisficing,” or “good enough,” approach to proportionality); Crocker, *supra* note 126, at 1110 (arguing that “one ought not be reduced to indecision” by inevitable uncertainty in determining proportionate punishment).

statutory sentence ranges provide insight into Congress's view of offense severity. With the exception of offenses that create an imminent danger of death or serious bodily injury, Congress established maximum penalties ranging from one to five years for environmental crimes.⁶⁶³ Moreover, Congress has not established mandatory minimum sentences in this area. The relatively low maximum sentences, coupled with the absence of minimums, suggest that Congress did not intend for relatively low-culpability environmental offenders to be incarcerated. However, the high maximum for knowing-endangerment offenses (fifteen years) suggests that substantial incarceration was expected to be the norm in that category of cases.

Second, the data on *past sentencing practices* provides insight into the views of sentencing judges, who have a unique and valuable perspective on the comparative severity of different types of crimes. The data suggests that, in the judges' view, incarceration should be the exception, not the norm, for environmental crimes, and that, when imposed, a sentence of incarceration should generally be for no more than a year.⁶⁶⁴ At the same time, the data also indicates that substantially longer sentences should be available in high-culpability cases.

Third, *opinion survey data* also indicates that incarceration should be imposed for some environmental crimes, but for shorter periods of time than mandated by the current guidelines. For instance, the Rossi and Berk study discussed in an earlier Section found consistent support for prison terms for environmental crimes. In response to a variety of hypothetical fact patterns, respondents imposed prison terms with median lengths of 0.8 years (plant manager discharges warm water into local stream) to three years (illegal logging pollutes stream, rendering it unsafe for swimming or drinking).⁶⁶⁵ More serious harms consistently produced longer sentence lengths.⁶⁶⁶ Yet, sentence lengths were lower than what was provided in the current guidelines.⁶⁶⁷

Fourth, we may *analogize to similar crimes*. In general, the Guidelines provide a base offense level of six to eight for regulatory crimes,⁶⁶⁸ which permits a nonincarcerative sentence for first-time offenders. On the other hand, offenses that involve a risk of serious bodily

⁶⁶³ See *supra* Part I.B.

⁶⁶⁴ See *supra* Part IV.D.

⁶⁶⁵ ROSSI & BERK, *supra* note 156, at 123, 126.

⁶⁶⁶ See *supra* note 207.

⁶⁶⁷ See *supra* Part V.A.4.f.

⁶⁶⁸ See, e.g., SENTENCING GUIDELINES, *supra* note 310, §§ 2N2.1, 2N3.1, 2Q2.1, 2S1.3, 2T1.1.

injury typically result in an offense level in or around the low twenties.⁶⁶⁹

Fifth, we may consider more *general perceptions of criminal punishment* in our society. There can be no question but that the line between incarcerative and nonincarcerative sanctions is viewed as crucial.⁶⁷⁰ Incarceration is considered to be a most serious sanction, especially in the white-collar area.⁶⁷¹ This suggests that the punishment is inappropriate for offenders whose culpability is minimal. At the same time, we tend not to view alternatives to incarceration as expressive of real moral condemnation.⁶⁷² This suggests that incarceration ought to be the norm for high-culpability defendants.⁶⁷³

All of the foregoing considerations suggest the same basic parameters for environmental sentencing. On the low end of the culpability scale, community-based sanctions should be available, such as community service, home detention, and fines, as an alternative to incarceration. On the high end of the culpability scale, incarceration should be the norm, including multiyear sentences for offenses that create risks of imminent death or serious bodily injury. Offenses with mid-range culpability should be arrayed proportionately between these extremes.

VII. CONCLUSION

Environmental law criminalizes a vast range of conduct, from very low to very high culpability. The substantive law, however, does not grade the offenses or otherwise make meaningful distinctions among offenders based on culpability. This leaves to sentencing the important business of sorting offenders, ensuring lenient sentences for low-culpability offenders and severe sentences for high-culpability offenders. As demonstrated above, the environmental provisions of the Federal Sentencing Guidelines are poorly designed to perform this sorting function. At the same time, it appears that, despite the Guidelines, low-culpability offenders are reasonably well protected *in practice*. Whether high-culpability offenders get what they deserve is less certain. In any event, to provide greater

⁶⁶⁹ See, e.g., *id.* §§ 2A2.1, 2A2.2, 2N1.1.

⁶⁷⁰ See Tonry, *supra* note 582, at 701 (noting “widespread view that only imprisonment counts”).

⁶⁷¹ See Hedman, *supra* note 6, at 895.

⁶⁷² See Rubin, *supra* note 128, at 50 (“[T]he only severe penalty we find acceptable, aside from the very small number of criminals eligible for the death penalty, is imprisonment.”); Tonry, *supra* note 582, at 701 (noting view that “few other sanctions seem commensurable with a multiyear prison sentence”).

⁶⁷³ For this reason, utilitarian arguments that white-collar criminals should always be fined instead of incarcerated, see, e.g., Posner, *supra* note 599, at 183, seem unsatisfactory.

assurance of proportionality in sentencing, as well as greater transparency, the environmental guidelines ought to be restructured so as to reflect culpability-based considerations in a more explicit and thorough fashion. Appendix A offers a specific proposal along these lines.

Indeed, as suggested earlier, *Blakely* offers an unprecedented opportunity to revisit fundamental structural decisions that were made in crafting the Federal Guidelines.⁶⁷⁴ At the most basic level, *Blakely* forces attention on the role of judicial discretion: how much room should judges have to bring their moral intuitions and practical wisdom to bear at sentencing on a case-by-case basis? To the extent that the Eighth Circuit's approach is adopted, the Guidelines would become merely advisory, not binding, and judicial discretion would be enhanced enormously. By contrast, to the extent that the Ninth Circuit's approach is adopted, judges would lose to the jury much of the discretion they currently have to increase sentences. The adoption of either approach by the Supreme Court would doubtlessly lead Congress and the Commission to consider mechanisms that would restore the judicial role to what it was before.⁶⁷⁵

The analysis here suggests that we should have no particular allegiance to the old system. In particular, I have shown a number of serious problems with the Commission's piecemeal approach to culpability, in which the judge is asked many focused questions about particular, objective facets of culpability, but is not authorized to weigh culpability in a holistic fashion.⁶⁷⁶ While I have described and criticized this approach at length in the environmental context, it is, in fact, found throughout the Federal Guidelines. For instance, drug sentencing is driven largely, and crudely, by the quantity of drugs involved in the offense.⁶⁷⁷ Child pornography sentencing also turns on numbers (i.e., numbers of images possessed or trafficked), plus a host of additional overlapping SOCs.⁶⁷⁸ Firearms offenses present the judge with a choice between eight different base offense levels and the application of six different SOCs, including a five-tiered SOC based on the number of firearms involved.⁶⁷⁹ The robbery guideline includes seven different SOCs, including an eight-tiered SOC based on the amount of financial loss and a five-tiered SOC based on

⁶⁷⁴ See *supra* Part IV.C.

⁶⁷⁵ For instance, by raising base offense levels and converting aggravators to mitigators, the pre-*Blakely* system could effectively be restored. See *supra* Part IV.C.

⁶⁷⁶ See *supra* Part V.A.4.b.

⁶⁷⁷ SENTENCING GUIDELINES, *supra* note 310, § 2D1.1.

⁶⁷⁸ *Id.* § 2G2.2.

⁶⁷⁹ *Id.* § 2K2.1.

degree of bodily injury.⁶⁸⁰

I have suggested that the piecemeal approach may be especially ill-suited for environmental crime, because the substantive law sweeps in conduct representing such a wide range of culpability.⁶⁸¹ However, the fundamental problems with the piecemeal approach also apply outside the environmental context. There are likely few, if any, offense categories for which the Commission can realistically hope to identify and weigh in advance all of the important factual considerations that bear on culpability. Indeed, the Commission has been faulted by others for its pervasive failure to include *mens rea* in the Guidelines sentencing calculus.⁶⁸² Moreover, the closer the Commission comes to including all of the important factors, the more likely it is that factors will routinely interact in unexpected ways to produce double-counting effects.⁶⁸³ In short, the piecemeal approach is unlikely to deliver anything close to the proportionality it promises.

Nor is the approach likely to produce consistency. The complexity that is associated with the piecemeal approach not only necessarily diminishes the reliability of the sentencing process, but also provokes resentment among judges.⁶⁸⁴ In light of such resentment, there should be little wonder that studies find circumvention of the Guidelines, as by the manipulation of fact-finding at sentencing, to be commonplace.⁶⁸⁵ Indeed, based on the divergence between expected and actual sentence lengths, the environmental sentencing data may itself reflect just such circumvention.

While the combination of circumvention and liberal use of the departure mechanism may help to correct the tendency of the piecemeal approach to create disproportionate sentences,⁶⁸⁶ Congress has shown little patience with such practices and is attempting to stamp them out.⁶⁸⁷ And Congress may be justified in doing so, for circumvention and departures raise important transparency concerns.⁶⁸⁸ A wide gap between the formal mandates of the law and the reality of actual practice drains the system of

⁶⁸⁰ *Id.* § 2B3.1.

⁶⁸¹ *See supra* Part V.A.4.b.

⁶⁸² Hofer & Allenbaugh, *supra* note 330, at 69-70.

⁶⁸³ *See supra* Part V.A.4.b.

⁶⁸⁴ *See supra* Part VI.A.

⁶⁸⁵ Schulhofer & Nagel, *supra* note 571, at 1285 (finding that Guidelines circumvented in twenty to thirty-five percent of cases); *see also* Freed, *supra* note 407, at 1683 (discussing increasing levels of “informal noncompliance” with Guidelines).

⁶⁸⁶ Because departures are authorized under certain circumstances in the Guidelines system, departures and circumvention are not the same thing; circumvention may occur without a departure and vice versa. Schulhofer & Nagel, *supra* note 571, at 1289-90.

⁶⁸⁷ *See supra* Part V.C.

⁶⁸⁸ *See supra* Part V.C.

predictability, impedes effective public review and debate, and gives rise to perceptions of arbitrariness.⁶⁸⁹ Rather than relying on circumvention and departures to fix the gaps and overcounting inherent in the piecemeal approach, it is better to have a system that displays trust in judges and accords them discretion at sentencing in an open and honest manner. Such a system would surely be no worse, and probably much better, than the current system in realizing the objectives of proportionality, consistency, and transparency.⁶⁹⁰

In any event, this system would be preferable even if the Supreme Court decided that *Blakely* applied to the Guidelines. To the extent that the Guidelines remain binding, the piecemeal approach generates much the same concerns—complexity, perceptions of arbitrariness, unexpected gaps and overcounting—whether the Guidelines are administered by judge or jury. To the extent that the Guidelines become purely advisory, their need for credibility with judges only grows in importance, for without credibility, non-binding Guidelines will be ignored. In order to have credibility with judges, reformed Guidelines will need to be built in a coherent way around explicit principles. They will also need to exhibit trust in the ability of judges to answer broad, open-ended questions at sentencing with fairness

⁶⁸⁹ See *supra* Part V.C; see also Barrett, *supra* note 6, at 1421 (referring to environmental sentencing as a “lottery”).

⁶⁹⁰ At the most abstract level, the structural issue here relates to the familiar debate in law between rules and standards. A rule requires the judge “to respond to the presence together of each of a list of easily distinguishable factual aspects of a situation by intervening in a determinate way.” Duncan Kennedy, *Form and Substance in Private Law Adjudication*, 89 HARV. L. REV. 1685, 1687-88 (1976). A standard, by contrast, “refers directly to one of the substantive objectives of the legal order. . . . The application of a standard requires the judge both to discover the facts of a particular situation and to assess them in terms of the purposes of social values embodied in the standard.” *Id.* at 1688. The current Federal Guidelines, of course, have been designed as rules, while my proposal employs standards.

Many of my criticisms of the environmental guidelines echo the generic critique of rules: they sacrifice “precision in the achievement of the objectives lying behind the rules. . . . [T]he combined over- and underinclusiveness amounts not to just licensing but to requiring official arbitrariness.” *Id.* at 1689. And, in responding to the objection that standards are too subjective, see *supra* Part VI.C, I have attempted to address the generic critique of standards: their application is uncertain and they provide judges with too much discretion to make decisions on the basis of improper criteria. Kennedy, *supra* note 89, at 1688-89. A rules-based system, or at least one in the form of the present Guidelines, suffers its own uncertainties as a result of its complexity. Likewise, there seems no good reason to prefer the certain arbitrariness of the Guidelines over the potential for ad hoc arbitrariness in the judicial implementation of standards. Moreover, a standards-based approach (at least as conceptualized here, i.e., one built around culpability standards) offers the advantage of focusing the attention of judges, prosecutors, defendants, and the public at large on the real harms of crime, which may contribute to the activation of desired norms, such as environmental compliance norms. See *supra* Part VI.C.

and consistency.⁶⁹¹ When crafting the Guidelines in the 1980s and adopting the piecemeal approach, the Commission chose not to display such confidence in the judiciary.⁶⁹² However, if seventeen years of persistent judicial criticism and circumvention have not convinced the Commission of the need to revisit its choice, *Blakely* may finally force it to do so.

⁶⁹¹ See Freed, *supra* note 409, at 1683 (arguing that Guidelines should be developed by an institution that “appreciates the wisdom, integrity and sense of justice that animates experienced judges, and that earns the respect of judges and practitioners”).

⁶⁹² See Berman, *supra* note 332, at 101 (“The [Guidelines] communicated a message that the judicial role in guideline sentencing was to be minimal.”).

APPENDIX A

PROPOSAL FOR REVISED ENVIRONMENTAL GUIDELINE TO REPLACE SECTIONS 2Q1.1, 1.2, & 1.3

SECTION 2Q1.1 MISHANDLING OF HAZARDOUS OR TOXIC SUBSTANCES, PESTICIDES, AND OTHER REGULATED ENVIRONMENTAL POLLUTANTS: RECORDKEEPING, TAMPERING, AND FALSIFICATION

- (a) Base Offense Level: **6**
- (b) Specific Offense Characteristics

	Defendant's Purpose Was to Cause Threatened Type of Harm	Defendant Knew Harm Was Practically Certain To Result	Defendant Recklessly Disregarded Risk of Harm	Defendant Negligently Disregarded Risk of Harm
Imminent Danger of Death or Serious Bodily Harm	Increase by 22 levels	Increase by 18 levels	Increase by 14 levels	Increase by 8 levels
Imminent Danger of Large-Scale Environmental Harm	Increase by 18 levels	Increase by 14 levels	Increase by 10 levels	Increase by 4 levels
Imminent Danger of Localized Environmental Harm	Increase by 14 levels	Increase by 10 levels	Increase by 6 levels	No Increase
Lesser Degree of Danger of Environmental Harm	Increase by 12 levels	Increase by 8 levels	Increase by 4 levels	Decrease by 2 levels
Danger of Regulatory Harm Only	Increase by 8 levels	Increase by 4 levels	No Increase	Decrease by 4 levels

APPLICATION NOTES:

1. The purpose of this section is to establish sentences for environmental offenders that are proportionate to their culpability, based chiefly on three considerations: the magnitude of the harm threatened by the offense, the likelihood that the harm would occur, and the offender's intent with respect to the threatened harm. These considerations are reflected in the two-dimensional matrix for specific offense characteristics. The vertical axis distinguishes among offenders based on the severity of the harm threatened and the likelihood of that harm occurring. These should be measured according to reasonable expectations as to the consequences of the offense, i.e., what a reasonable person with the defendant's knowledge at the time of the offense would expect would happen as a result of the offense. The horizontal axis distinguishes among offenders based on their state of mind as to the threatened harms.
2. "Environmental harm" means any non-trivial injury caused by the introduction of hazardous substances or other pollutants into the environment. The term includes such categories of harm as physical injury and emotional distress suffered by human beings, diminution in property values, environmental remediation expenses, disruptions to business or other social activities, permanent damage to the integrity of an ecosystem, and death of plants and animals.
3. "Large-scale environmental harm" means environmental harm on a scale that might fairly be thought of as "disastrous." In determining whether threatened harms are on this scale, the following considerations may be relevant: the geographical scale of the harm, the duration of the harm, the irreparability of the harm, the possibility of physical injury to human beings, the number of people affected, the number of plants and animals affected, and the economic value of the harm. Examples of large-scale environmental harm include: irreparable destruction of hundreds of acres of ecologically rich wetlands; exposure of dozens of people to a known carcinogen; evacuation of an entire town for more than a month; and the closure of a popular beach for a year, with catastrophic financial losses for local businesses.
4. "Localized environmental harm" means substantial environmental harm that does not reach the level of "large-scale environmental harm." Examples of localized environmental harm include soil and groundwater contamination that can be contained and remediated so as to prevent significant human health risks; death of a small number of animals, without long-term threats to the viability of a population or an ecosystem; and discharges of air or water pollution that may contribute to violations of air or water quality standards.
5. "Regulatory harm" means harm to the integrity of the environmental regulatory system. Environmental violations that do not threaten environmental harm, including some reporting and recordkeeping violations, will nonetheless generally threaten regulatory harms. Regulatory harms may include the costs to regulatory and enforcement agencies of investigating and prosecuting the underlying environmental violation; impairment of the ability of governmental agencies, legislatures, and scientific bodies to monitor, assess, and respond appropriately to environmental risks; and loss of public confidence in the effectiveness of the environmental regulatory system. While regulatory harms should generally be regarded as less severe than environmental harms, they may be appropriately considered at sentencing,

particularly, as indicated in the culpability matrix, where the offender has purposely or knowingly acted so as to undermine the integrity of the regulatory system.

6. The categories on the vertical axis should not be employed in a mechanistic fashion, but, rather, so as to effectuate the goal of the vertical axis, i.e., the assessment of relative culpability based on the harm threatened and the likelihood that the threatened harm would occur. If the culpability of the offender's conduct is not adequately captured by any of the five categories, then an upward or downward departure should be employed, consistent with the basic structure of the matrix. Thus, for instance, if the offense conduct created an imminent danger of environmental harm that is clearly in excess of localized harm, but also clearly less than large-scale harm, the court should enhance the offense level to a midway point between localized and large-scale harm.

7. The vertical axis reflects threatened harm, not actual harm. Harm that actually occurred may, however, have some probative value in determining whether the threat of a particular harm was imminent. Moreover, where actual harm clearly and substantially differs from threatened harm, an upward or downward departure along the vertical axis to a midrange point between the actual and threatened harm may be appropriate.

8. The horizontal state-of-mind axis relates to the offender's knowledge and intent with respect to the type of harm that was threatened by the offender's conduct. The four categories are intended to track the basic culpability categories of the Model Penal Code.

9. If the offender's violation of the law was a result of a justifiable misunderstanding of the law, a downward departure may be appropriate to the extent that the misunderstanding mitigates the offender's culpability. A departure on this basis will normally be limited to circumstances in which the offense conduct threatens no more than localized environmental harm and the offense conduct is otherwise reasonable. A misunderstanding of the law is not justifiable unless it is based on an authoritative interpretation of the law from an appropriate governmental agency, and no contrary authoritative interpretation is available at the time of the offense. The reasonability of the offender's conduct should be assessed by reference to the severity of the harm threatened by the conduct, the likelihood of the harm occurring, the extent to which the risk of harm was merely to the offender's own person or property, the social benefits of the offender's conduct (if any), and the availability of cost-effective alternatives to the offender's conduct that would have reduced or eliminated the threat of harm.

APPENDIX BPUBLISHED APPELLATE DECISIONS INTERPRETING ENVIRONMENTAL
GUIDELINES

1. *United States v. Bogas*, 920 F.2d 363 (6th Cir. 1990) (“six-figure” cleanup expenditure is “substantial”; “actual harm” not required for application of actual-discharge aggravator).

2. *United States v. Catucci*, 55 F.2d 15 (1st Cir. 1995) (ongoing-discharge aggravator applied where disposal occurred on two different days).

3. *United States v. Chau*, 293 F.3d 96 (3d Cir. 2002) (holding that \$58,000 cleanup expenditure is “substantial”; permit-violation aggravator does not apply when permit was city-issued).

4. *United States v. Cooper*, 173 F.3d 1192 (9th Cir. 1999) (permit-violation aggravator applies where defendant caused third party to violate permit; actual-discharge aggravator applied when defendant’s conduct complied with regulations, but not permit).

5. *United States v. Cunningham*, 194 F.3d 1186 (11th Cir. 1999) (cleanup aggravator applied where expenditures not to remediate environmental contamination, but to prevent contamination from occurring; actual-discharge aggravator does not require actual contamination).

6. *United States v. Dillon*, 351 F.3d 1315 (10th Cir. 2003) (physical-injury aggravator properly applied even though district court made no specific findings as to likelihood of harm).

7. *United States v. Eidson*, 108 F.3d 1336 (11th Cir. 1997) (requirements of cleanup aggravator may be satisfied based on estimates of future expenses; two discharges are “repetitive”).

8. *United States v. Ellen*, 961 F.2d 462 (4th Cir. 1992) (application of both ongoing-discharge and no-permit aggravators did not constitute impermissible double-counting).

9. *United States v. Ferrin*, 994 F.2d 658 (9th Cir. 1993) (no-permit

aggravator applied to low-ranking person in organization, even though defendant's supervisor was responsible for obtaining permit; actual-discharge aggravator requires environmental contamination).

10. *United States v. Freeman*, 30 F.3d 1040 (8th Cir. 1994) (actual-discharge aggravator properly applied when leaked chemicals were volatile and could have entered creek via storm sewer).

11. *United States v. Goldfaden*, 959 F.2d 1324 (5th Cir. 1992) (actual-discharge aggravator does not require actual contamination).

12. *United States v. Goldfaden*, 987 F.2d 225 (5th Cir. 1993) (no-permit aggravator applied even though defendant could not have obtained permit had he sought one).

13. *United States v. Goldsmith*, 978 F.2d 643, (11th Cir. 1992) (downward departure from no-permit aggravator not required where conduct posed "significant risk to the environment," even though little actual damage was done).

14. *United States v. Ho*, 311 F.3d 589 (5th Cir. 2002) (ongoing-discharge aggravator applied in asbestos case based on circumstantial evidence that building was open, permitting asbestos fibers to be blown into outside air).

15. *United States v. Kelley Technical Coatings, Inc.*, 157 F.3d 432 (6th Cir. 1998) (application of no-permit aggravator not impermissible double-counting).

16. *United States v. Kuhn*, 345 F.3d 431 (6th Cir. 2003) (unguided departure not permitted based on low degree of harm; not impermissible double-counting to apply both permit-violation and actual-discharge aggravators).

17. *United States v. Liebman*, 40 F.3d 544 (2d Cir. 1994) (ongoing-discharge aggravator does not require actual contamination; aggravator cannot be applied if defendant convicted for violation of reporting requirement and defendant was not trying to conceal other offenses).

18. *United States v. Merino*, 190 F.3d 956 (9th Cir. 1999) ("mid-five figure cleanup" is not "substantial").

19. *United States v. Moskowitz*, 883 F.2d 1142 (2d Cir. 1989) (evacuation aggravator applied where defendant illegally transported hazardous substance on commercial aircraft, causing aircraft to be diverted mid-flight).

20. *United States v. Overholt*, 307 F.3d 1231 (10th Cir. 2002) (actual-discharge aggravator applied where waste injected into underground well).

21. *United States v. Pearson*, 274 F.3d 1225 (9th Cir. 2001) (in asbestos case, environmental contamination could be inferred by evidence of asbestos on outside surface of bag, satisfying requirements for actual-discharge aggravator; evidence of exposure to asbestos justified application of physical-injury aggravator, even without evidence of specific magnitude of health risks created).

22. *United States v. Phillips*, 356 F.3d 1086 (9th Cir. 2004) (for purposes of cleanup aggravator, expenses for CERCLA cleanup could be attributed to defendant, even though defendant's offense was CWA violation and defendant did not create contamination problem, but only exacerbated it).

23. *United States v. Rapanos*, 235 F.3d 256 (6th Cir. 2000) (no unguided departure permitted based on low degree of harm).

24. *United States v. Rutana*, 18 F.3d 363 (6th Cir. 1994) (utility-disruption aggravator applied even though no evidence that defendant's conduct caused a substantial expense to the utility).

25. *United States v. Schmidt*, 47 F.3d 188 (7th Cir. 1995) (application of permit-violation aggravator did not constitute impermissible double-counting).

26. *United States v. Sellers*, 926 F.2d 410 (5th Cir. 1991) (actual-discharge aggravator applied based on leak in drum, even though no evidence as to volume or fate of leaked chemical).

27. *United States v. Technic Servs., Inc.*, 314 F.3d 1031 (9th Cir. 2002) (although actual contamination must be shown for ongoing-discharge aggravator, standard satisfied by evidence from which actual contamination could reasonably be inferred).

28. *United States v. Thorn*, 317 F.3d 107 (2d Cir. 2003) (in asbestos case, physical-injury aggravator applied based on medical evidence that

exposed workers would likely become ill in the future, even though workers include defendant's co-conspirators and workers exacerbated health risk by smoking).

29. *United States v. Van Loben Sels*, 198 F.3d 1161 (9th Cir. 1999) (actual-discharge aggravator applied where defendant caused discharge to sewage treatment plant).

30. *United States v. Wells Metal Finishing, Inc.*, 922 F.2d 54 (1st Cir. 1991) (utility-disruption aggravator applied where defendant caused as little as \$24,000 in losses to utility).

31. *United States v. West Indies Transp., Inc.*, 127 F.3d 299 (3d Cir. 1997) (ongoing-discharge aggravator applied to discharge of raw human sewage, even though sewage was biodegradable).

32. *United States v. White*, 270 F.3d 356 (6th Cir. 2001) (actual-discharge aggravator not applied where discharge not criminalized by any environmental statute).

33. *United States v. Williams*, 195 F.3d 823 (6th Cir. 1999) (cleanup aggravator applies when there has been substantial expenditure, even if the defendant paid for the cleanup).