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Six Degrees of Graduation: Law and Economics of Variable Sanctions

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SIX DEGREES OF GRADUATION: LAW AND ECONOMICS OF VARIABLE SANCTIONS

ALEX RASKOLNIKOV*

ABSTRACT

From parking tickets to tax fines and punitive damages, legal sanctions matter in people's lives. Yet neither the legal nor the economics literature offers a comprehensive treatment of sanctions. Their practical complexity is not well understood, and their theoretical analysis is fragmented. This Essay addresses both limitations using tax law as a primary example. Sanctions are complex because they vary along at least six different dimensions: aggressiveness, magnitude, culpability, effort to comply, likelihood of detection, and offense history. These six degrees of sanction graduation are distinct, and potentially independent, but often intertwined in obscure and perplexing ways. After clarifying the unique nature of each degree (or axis) of graduation, this Essay reviews the literature in search of the economic rationale for varying sanctions along each axis in light of the incentives such variation creates. I conclude that three graduation axes of great practical significance—aggressiveness, culpability, and offense history—are the least developed theoretically. Two other dimensions—the likelihood of detection and the effort to comply with the law—are more conceptually advanced, although the theory is still fairly removed from the enforcement realities. In contrast, economic analysis reveals a good grasp of the magnitude axis and a clear path to modelling the real-life features that have remained overlooked thus far. By highlighting the complexity of sanctioning regimes and emphasizing the related theoretical successes and shortcomings, this Essay identifies fruitful areas of future research, some of which I pursue in related work.

I. INTRODUCTION.....	1015
II. SIX DEGREES OF SANCTIONS GRADUATION.....	1017
III. EVALUATING GRADUATED SANCTIONS.....	1025
A. Aggressiveness: Critical in Law; Overlooked in Economics.....	1025
B. Magnitude: Clear Insights, Attainable Improvements.....	1032
C. Culpability: A Long-Standing Challenge.....	1033
D. Effort: Some Findings, Few Clear Results.....	1034
E. Detection: A Continuing Inquiry.....	1038
F. History: A Persistent Puzzle.....	1040
IV. CONCLUSION.....	1041

I. INTRODUCTION

If one believes that people respond to incentives, legal sanctions are just as important as legal rules. Get one wrong and the legal regime fails no matter how well the other one is designed. Yet with few exceptions, the economic analysis of law has paid little attention to sanctions. This lack of interest would be understandable if sanctions could

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only be designed in a limited number of ways, or if the actual sanctions were simple and uniform. Neither is true, however. Sanctions can and do vary a great deal along a number of dimensions. Do these variations make sense? Are they consistent with plausible assumptions about individual decision-making? Are they likely to improve efficiency or facilitate compliance? Strange as it may sound, the economic analysis of law is not close to answering these questions.

This Essay highlights the complexity of sanctioning regimes and our limited understanding of the resulting incentives, using tax penalties as a primary example. Several reasons make tax law a good case study. The actual tax penalties are complex. They are endlessly debated by practitioners and frequently adjusted by rulemakers. And they have been scrutinized by legal academics and economists more extensively than penalties for many other regulatory violations. In tax, enforcement is always a "hot topic." So it is particularly useful to consider how the real-life tax enforcement machinery reflects—or fails to reflect—theoretical insights.

This Essay has a simple structure. Part II explains what I mean by sanctions complexity and identifies six dimensions (or axes) along which penalties may vary. These are the six degrees of sanctions graduation. While I use U.S. tax penalties as an example, the analysis is neither U.S.- nor tax-specific. Any enforcement regime may exhibit each of the six degrees of graduation, and many actually contain more than one graduation axis. Part III summarizes and evaluates the economic rationales for varying sanctions along each axis of graduation. Again, these rationales are not limited to any regulatory area. Although tax enforcement literature is relatively rich in its analysis of various enforcement factors, studies that are not tax-specific offer valuable insights as well. I conclude that the three graduation axes of great practical significance—aggressiveness, culpability, and offense history—are the least developed theoretically. Two other dimensions—the likelihood of detection and the effort to comply with the law—are more conceptually advanced. Even there, however, the theory is fairly removed from the realities of tax enforcement. In contrast, economic analysis reveals a good grasp of the magnitude axis and a clear path to modeling the real-life features that have remained overlooked thus far. By highlighting the complexity of sanctioning regimes

and emphasizing the related theoretical successes and shortcomings, this Essay identifies fruitful areas of future research, some of which I pursue in related work.

II. SIX DEGREES OF SANCTIONS GRADUATION

There are many ways to define complexity.¹ For the purposes of this inquiry, sanctions are more complex if they vary along a greater number of legally relevant dimensions—if they have more degrees of graduation. For instance, a sanction that depends on the magnitude of lost profits is less complex than a sanction that depends on that magnitude and also on the putative offender's state of mind. That latter sanction, in turn, is less complex than the one that depends on the same two factors and also on the offender's effort to conceal the violation. Saying that sanctions determined only by the size of lost profits are not complex does not mean that calculating lost profits is a trivial matter. But making this determination plus the other two clearly places higher demands on decision-makers and complicates the incentives of potential offenders.

Most discussions of legal sanctions recognize that sanctions often vary along a certain dimension. Commentators frequently state that acts that are more aggressive, egregious, reprehensible, and the like are subject to a greater punishment. These terms, however, have no accepted meanings. The term "egregious," for instance, has been used to refer to acts that are particularly harmful,² especially culpable,³ artfully concealed,⁴ or reveal a great departure from community norms.⁵ Needless to say, one cannot analyze a graduated penalty regime without a precise understanding of a particular axis of graduation. Many different axes may and do exist, and tax sanctions vary along all of them.

To a legal analyst, the most important dimension is what lawyers call *aggressiveness* of a particular act or position.⁶ Aggressiveness is

1. David Bradford, for instance, spoke of rule complexity, compliance complexity, and transactional complexity. See DAVID F. BRADFORD, UNTANGLING THE INCOME TAX 266-67 (1999).

2. See *TXO Prod. Corp. v. All. Res. Corp.*, 509 U.S. 443, 459-66 (1993).

3. See *BMW of N. Am., Inc. v. Gore*, 517 U.S. 559, 582 (1996).

4. See A. Mitchell Polinsky & Steven Shavell, *Punitive Damages: An Economic Analysis*, 111 HARV. L. REV. 869, 874 (1998).

5. See Robert D. Cooter, *Economic Analysis of Punitive Damages*, 56 S. CAL. L. REV. 79, 89 (1982).

6. This use of the term "aggressiveness" is well established in tax law scholarship. See Joseph Bankman, *The Economic Substance Doctrine*, 74 S. CAL. L. REV. 5, 5 (2000); Mark P. Gergen, *The Logic of Deterrence: Corporate Tax Shelters*, 55 TAX L. REV. 255, 275 (2002); Kyle D. Logue, *Optimal Tax Compliance and Penalties When the Law Is Uncertain*, 27 VA. TAX REV. 241, 251 (2007); Leigh Osofsky, *Some Realism About Responsive Tax Administration*, 66 TAX L. REV. 121, 144-45 (2012); Alex Raskolnikov, *Relational Tax Planning Under*

the extent to which one's behavior deviates from legally permissible conduct. Thus, if a speed limit is 55 mph, driving at 60 mph is a less aggressive speeding violation than driving at 90 mph. If the standard is reasonable care, negligent behavior is less aggressive than a grossly negligent action, which itself is less aggressive than a reckless action. And if the statute outlaws "restraint[s] of trade,"⁷ an exchange of pricing information among competitors is a less aggressive action than a general discussion of a possible cooperation in setting prices, which, in turn, is less aggressive than a written agreement establishing a secret cartel.⁸ The last two examples highlight the relationship between aggressiveness and legal uncertainty. What care is "reasonable"? What actions "restrain" trade?⁹ Law is full of similarly vague terms, and tax law is no exception. When the meaning of the law is uncertain, more aggressive acts have a higher likelihood of being found to violate the law. Aggressiveness, therefore, is closely related to the probability of legal punishment.

Because more aggressive acts are more likely to be sanctioned, even a fixed statutory fine yields higher expected penalties for more aggressive violations. Sometimes, however, statutory fines themselves vary with aggressiveness. Speeding fines are the most familiar example.

Risk-Based Rules, 156 U. PA. L. REV. 1181, 1181 (2008); David M. Schizer, *Sticks and Snakes: Derivatives and Curtailing Aggressive Tax Planning*, 73 S. CAL. L. REV. 1339, 1339 (2000); Daniel Shavero, *Disclosure and Civil Penalty Rules in the U.S. Legal Response to Corporate Tax Shelters*, in TAX AND CORPORATE GOVERNANCE 229, 230-31 (Wolfgang Schön ed., 2008); David A. Weisbach, *An Economic Analysis of Anti-Tax-Avoidance Doctrines*, 4 AM. L. & ECON. REV. 88, 107 (2002). The accountancy literature often uses the term aggressiveness in a similar manner. See Paul J. Beck & Woon-Oh Jung, *Taxpayers' Reporting Decisions and Auditing Under Information Asymmetry*, 64 ACCT. REV. 468, 474-75 (1989); Michelle Hanlon & Shane Heitzman, *A Review of Tax Research*, 50 J. ACCT. & ECON. 127, 137 (2010); Peggy A. Hite & Gary A. McGill, *An Examination of Taxpayer Preference for Aggressive Tax Advice*, 45 NAT'L TAX J. 389, 389 & 400 n.3 (1992); Petro Lisowsky et al., *Do Publicly Disclosed Tax Reserves Tell Us About Privately Disclosed Tax Shelter Activity?*, 51 J. ACCT. RES. 583, 590 (2013). Economists occasionally refer to "aggressiveness" to convey the same or similar concept. See Kate Krause, *Tax Complexity: Problem or Opportunity?*, 28 PUB. FIN. REV. 395, 396 (2000). I use the term "aggressiveness" rather than degree of "fault"—the term typically used in the general optimal deterrence analysis. See, e.g., A. Mitchell Polinsky & Steven Shavell, *The Theory of Public Enforcement of Law*, in 1 HANDBOOK OF LAW AND ECONOMICS 403, 407 (A. Mitchell Polinsky & Steven Shavell eds., 2007). I do so both to reflect the customary use in the tax literature and to avoid moral connotations of the latter term.

7. 15 U.S.C. § 1 (2012).

8. The legality of price information exchanges has long been a subject of debate. See Richard A. Posner, *Information and Antitrust: Reflections on the Gypsum and Engineers Decisions*, 67 GEO. L.J. 1187, 1198 (1979).

9. The Supreme Court has long held that not only must there be a "restraint" of trade (itself an unclear term) to produce an antitrust violation, but that the restraint must be "unreasonable" as well. See *Nat'l Collegiate Athletic Ass'n v. Bd. of Regents of the Univ. of Okla.*, 468 U.S. 85, 98 (1984).

Greater speeds in excess of the speed limit lead to higher fines.¹⁰ The same is true of particularly serious violations of environmental regulations.¹¹ But no regulatory regime that I am aware of comes close to tax in the degree of refinement of the aggressiveness-based penalty graduation.

Instead of presenting this feature of tax sanctions in all its splendor,¹² the following summary gives only a glimpse of the nuance and complexity involved. If a judge in a U.S. tax case decides that a taxpayer underpaid taxes, the judge then needs to address the penalty issue. Whether the penalties are due, and how high they ought to be, depends on the judge's *ex post* evaluation of the *ex ante* strength of the taxpayer's position. "Strength" is yet another term that lawyers often use in reference to the likelihood of success on the merits, with stronger (less aggressive) positions being more likely to succeed than weaker (more aggressive) ones. Civil tax penalties vary from zero to 75% of the tax underpayment (with the intermediate values of 20%, 30%, and 40%) depending on whether the position is "more likely than not" to be correct, or is supported by a "substantial authority," or at least has a "reasonable basis," or, worse yet, is just a "colorable claim," is merely not "frivolous," or not "patently improper."¹³ Much ink has been spilled debating whether this or that tax position satisfies one of these thresholds, and whether this or that fine percentage should correspond to a particular level of aggressiveness. Thus, aggressiveness (or strength) of a legal position is an important axis of penalty graduation, especially in tax.

The review of aggressiveness-based tax penalties reveals the second axis of graduation. All penalties just described are calculated as a percentage of a tax underpayment rather than a fixed dollar amount. The higher the underpayment, the higher the penalty. So tax sanctions depend on the magnitude of the underpayment. Thus, *magnitude* is another axis of graduation present in tax and many other regulatory regimes. Tax, however, reveals a rather complex magnitude-based graduation scheme. Some tax sanctions increase *disproportionately* with the size of the underpayment. For instance, a penalty for a "substantial valuation misstatement" is 20% of the misstated amount.¹⁴ This

10. See, e.g., MASS. GEN. LAWS ANN. ch. 90, § 20 (West, Westlaw through ch. 171 of the 2015 1st Annual Session and Ch. 5, except for Ch. 1, of the 2016 2nd Annual Session) (imposing increasing fines for greater speeds in excess of the speed limit).

11. See RCRA ENFT DIV., U.S. ENVTL. PROT. AGENCY, RCRA CIVIL PENALTY POLICY 18 (2003), <https://www.epa.gov/sites/production/files/documents/rcpp2003-fnl.pdf>.

12. For thorough reviews, see Michael Doran, *Tax Penalties and Tax Compliance*, 46 HARV. J. ON LEGIS. 111, 118-19 (2009); Sarah B. Lawskey, *Probably? Understanding Tax Law's Uncertainty*, 157 U. PA. L. REV. 1017, 1050 (2009); Logue, *supra* note 6, at 256.

13. I.R.C. §§ 6662, 6664 (2012); Treas. Reg. § 1.6662-3(b)(3) (as amended in 2003).

14. See I.R.C. § 6662(a)-(b).

means, of course, that greater misstatements lead to higher penalties. If, however, a misstatement is particularly large ("gross" rather than "substantial"), the penalty rises to 40% of the misstated amount.¹⁵ This disproportionate increase in sanctions for particularly large misstatements produces additional magnitude-based graduation of penalties.¹⁶ Punitive damages (when conceived as either applicable or appropriate for particularly great external harms) are the most well-known example of this additional magnitude-based graduation. There are others.¹⁷

As soon as we recognize two different axes of graduation, it is important to emphasize that they may be independent. A taxpayer may engage in outright evasion of a ten-dollar tax liability (high aggressiveness; small magnitude) or take an uncertain but rather conservative position saving a million dollars in taxes (low aggressiveness; high magnitude). Of course, one may evade a million dollars in tax (high aggressiveness, high magnitude) or take a conservative ten-dollar deduction (low aggressiveness, small magnitude). The potential independence of behavioral variation along the two axes underscores an important point: it is essential to be clear about which particular axis of graduation one investigates. If a given term such as "egregious" is used to describe both aggressiveness and magnitude—as it sometimes is—confusion is inevitable. Thus, recognizing just two degrees of graduation highlights the importance of conceptual precision.

Culpability, or the offender's mental state, is the third degree of graduation. This axis is most relevant in criminal law, where punishment often depends on whether the defendant acted with reckless disregard, knowledge, intent, or specific intent (which itself has multiple levels). Purpose, willfulness, *scienter*, and similar concepts all reflect various points on the culpability axis. Conceptually, culpability is just a subset of aggressiveness-based graduation where the relevant legal threshold is the actor's state of mind. One may think of culpability as mental aggressiveness. Nonetheless, graduation along this axis deserves a separate treatment because changes in aggressiveness and culpability are often independent of each other.

Tax penalties offer many examples of culpability-based graduation. Numerous tax provisions deny tax benefits (and raise the specter of sanctions) if a taxpayer acts with "a principal purpose,"¹⁸ "the principal

15. See I.R.C. § 6662(h)(1).

16. The same magnitude-based graduation applies to overstatements of pension liabilities and estate or gift tax valuation understatements. See *id.* § 6662(a), (b)(4)-(5), (h)(2)(B)-(C). Moreover, the "valuation misstatement" penalty results in another disproportionate magnitude-based increase as the size of an understatement changes from insubstantial (and not subject to that penalty) to "substantial" (and penalized at 20% of the understatement).

17. See, e.g., Securities Exchange Act of 1934, 15 U.S.C. § 78u(d)(3)(B)(iii) (2012) (establishing increased "third-tier" sanctions for violations that "result[] in substantial losses").

18. I.R.C. § 382(l)(1)(A).

purpose,”¹⁹ “a significant purpose,”²⁰ or just “a purpose”²¹ of tax avoidance or evasion. All of the quoted terms refer to mental states, and each means a different degree of intentionality.²² For losing tax positions, sanctions vary depending on whether the underpayment is “willful”²³ and whether a taxpayer acted with “willful neglect.”²⁴ The economic substance doctrine conditions tax benefits on the taxpayer’s state of mind as well.²⁵ This is particularly important because the penalty increases from 20% to 40% for underpayments that result from transactions lacking economic substance.²⁶ Thus, culpability is an important factor in determining sanctions for tax law violations.

It is well known that an act (more precisely, an act of a given aggressiveness) may be subject to civil or criminal sanctions, or no sanctions at all, depending on the offender’s state of mind.²⁷ Less understood, perhaps, is the fact that a more aggressive conduct can be less culpable and vice versa. Tax law provides ready examples. A losing tax position taken intentionally and with full knowledge that it is more likely to be illegal than legal is not subject to any sanctions as long as it is not too aggressive (has “substantial authority”) (high culpability, moderate aggressiveness).²⁸ Another position taken with no knowledge or intent to evade the law that happens to be more aggressive (has only a “reasonable basis”) is subject to fines if not disclosed (low culpability, high aggressiveness).²⁹ Of course, aggressiveness and culpability may vary in tandem as well. One may intentionally evade (high culpability, high aggressiveness), or comply while intending to do so (low culpability, low aggressiveness). And it is equally apparent that culpability and magnitude may vary independently in almost every legal regime.

19. *Id.* § 269(b)(1)(D).

20. *Id.* § 6662(d)(C)(ii).

21. *Id.* § 357(b)(1)(A).

22. For a seminal discussion, see Walter J. Blum, *Motive, Intent, and Purpose in Federal Income Taxation*, 34 U. CHI. L. REV. 485 (1967).

23. See MICHAEL I. SALTZMAN & LESLIE BOOK, IRS PRACTICE AND PROCEDURE ¶ 7B.02 (2013).

24. I.R.C. § 6651(a).

25. Specifically, the courts must inquire into whether the taxpayer had a “non-tax business purpose.” See Martin J. McMahon, Jr. et al., *Recent Developments in Federal Income Taxation: The Year 2011*, 12 FLA. TAX REV. 235, 364 (2012).

26. See I.R.C. § 6662(i)(1).

27. For a detailed analysis of a wide range of such acts, see Alex Raskolnikov, *Irredeemably Inefficient Acts: A Threat to Markets, Firms, and the Fisc*, 102 GEO. L.J. 1133 (2014).

28. A position is generally believed to have “substantial authority” if it has at least a 40% chance of success on review. No penalties apply to such positions even if the taxpayer was convinced that the likelihood of success was less than fifty-fifty. For a discussion and critique of this feature, see Doran, *supra* note 12, at 118-19 & tbl.1.

29. See I.R.C. § 6662(d)(2)(B). “Reasonable basis” is generally viewed as about a 25% chance of success on review. For a discussion, see Logue, *supra* note 6.

Thus, we have now identified three separate axes of penalty graduation, all potentially independent, and all present in the tax setting.

The fourth axis is the degree of care taken by a putative offender to comply with the law. Tax penalties, for example, depend on whether taxpayer's actions reveal "negligence or disregard of rules or regulations," where "the term 'negligence' includes any failure to make a reasonable attempt to comply with the provisions of this title, and the term 'disregard' includes any careless, reckless, or intentional disregard."³⁰ Notably, these provisions do not focus on aggressiveness (or, at least, not only on aggressiveness). Rather, they depend on "taxpayer's effort to assess the taxpayer's proper tax liability,"³¹ such as by ascertaining the rules, making inquiries, and the like.³² Perhaps the most important decision in that regard is whether to obtain expert advice. The importance is due both to cost considerations and to the legal consequences of the decision.³³ I will refer to this axis of penalty graduation as *effort*.

While it is probably obvious that effort is distinct from magnitude, it may be less clear that effort is different from aggressiveness and culpability. Yet it is. Starting with aggressiveness, it may seem intuitive that if one ignores the law one will end up breaking some rules. Low effort, one may think, leads to high aggressiveness (and high effort to low aggressiveness). Perhaps sometimes it does; but other times it does not. One may just happen to take a conservative tax position while making no effort to understand the relevant rules (low effort, low aggressiveness). One may also take an aggressive "reasonable basis" position after engaging expert advisors and while retaining all the relevant records (high effort, high aggressiveness). Effort and culpability may diverge as well. One taxpayer may learn the law and then deliberately break it anyway (high effort, high culpability). Another taxpayer may fail to comply with an obscure rule that the taxpayer made no effort to understand because the taxpayer was unaware of the rule's

30. I.R.C. § 6662(b)(1), (c).

31. Treas. Reg. § 1.6664-4(b)(1) (as amended in 2003).

32. Similarly, sanctions for violating the Securities Exchange Act increase if the offender exhibits a "deliberate or reckless disregard of a regulatory requirement." 15 U.S.C. § 78u(d)(3)(B)(ii) (2012).

33. In many cases, reliance on professional advice immunizes the taxpayer from penalties. In some cases it does not. There has been much litigation on this issue, including recently. See SALTZMAN & BOOK, *supra* note 23, ¶ 7B.03.

existence (low effort, low culpability). A third taxpayer may work hard to understand a legal command, but make an innocent mistake (high effort, low culpability). More scenarios may be readily imagined.

Without claiming to identify all possible axes of penalty graduation, I will highlight two more. The likelihood of detection is a well-known variable in the deterrence literature. Not surprisingly, sanctions may vary along this dimension, and tax sanctions do vary in that manner. For instance, losing positions supported by a “reasonable basis” are penalty-free if they are disclosed, but not otherwise.³⁴ Transactions lacking economic substance are subject to a 20% or 40% penalty depending on whether a taxpayer discloses them on a return (with a higher penalty applying to non-disclosed transactions).³⁵ And efforts to conceal a tax underpayment make an imposition of a fraud penalty more likely.³⁶ At the risk of stating the obvious, I will note that the *detection* axis is potentially independent from aggressiveness, culpability, magnitude, or effort. As the number of axes increases, it becomes burdensome to give examples showing all possible combinations. But just to raise a few possibilities, one taxpayer taking a somewhat aggressive position may try to hide it while another may not. In each case, the amount of underpayment may be large or small, and the same is true of a taxpayer’s effort to ascertain what the law requires.

Finally, sanctions may and do vary based on the offender’s history of prior violations. This *history* axis is very familiar in criminal law. Criminal tax penalties increase with the number of prior offenses,³⁷ just like most other criminal sanctions do under the U.S. Sentencing Guidelines.³⁸ At the same time, lack of prior criminal history is a mitigating factor in tax evasion sentencing.³⁹ Offense history is important for civil penalties as well. For example, a penalty for failure to disclose a reportable transaction may be rescinded if a “taxpayer has an established history of properly disclosing other reportable transactions and complying with other tax laws.”⁴⁰ Similarly, a penalty for failure to file certain returns is increased if the taxpayer’s offense “is part of a pattern of conduct . . . of repeatedly failing to file timely or repeatedly

34. See I.R.C. § 6662(d)(2).

35. See *id.* § 6662(i)(1).

36. See SALTZMAN & BOOK, *supra* note 23, ¶ 7B.02[4][a].

37. See U.S. SENTENCING GUIDELINES MANUAL § 5E1.5.1 cmt. background (U.S. Sentencing Comm’n 2015).

38. See *id.* at ch. 4-5 (U.S. SENTENCING COMM’N 2015).

39. See *United States v. Moore*, 344 F. App’x 767, 769 (3rd Cir. 2009).

40. Treas. Reg. § 301.6707A-1(d)(3)(B)(iii) (as amended in 2011).

failing to include correct information” on the return.⁴¹ As is probably obvious, the offense history may be independent from any of the other five graduation axes.

I have repeatedly qualified the point about the independent variation along each of the six axes with terms like “potentially” and “often” for a reason. While sanctions may vary independently along each axis, policymakers may make the variations interdependent as well. Again, tax provides some stark examples. A tax understatement is subject to sanctions if it is “substantial” but not otherwise.⁴² “Substantiality” is determined by the size of the understatement, revealing magnitude-based graduation.⁴³ However, a taxpayer who discloses the relevant information on the return is not viewed as understating any tax.⁴⁴ Thus, the rule intertwines magnitude-based and detection-based graduation. But this is not the end of the story. A disclosed position does not count as being disclosed if it is not supported by a “reasonable basis” (aggressiveness-based threshold), or is not properly substantiated (effort-based threshold), or is attributable to a tax shelter.⁴⁵ The last clause introduces a culpability-based threshold because a “tax shelter” is defined by reference to a taxpayer’s purpose for entering into the transaction.⁴⁶ In sum, the substantial understatement penalty—a rule that takes less than a quarter of a page in the Code of Federal Regulations—blends together thresholds reflecting five (!) different axes of graduation, leaving only the offense history out of the picture. Is it any wonder that tax lawyers make a nice living explaining tax law to the uninitiated?

Why are tax sanctions so complicated? Does it make sense to vary penalties along so many different dimensions? What assumptions about people’s behavior support any of these variations? Which graduated penalty structures are likely to improve efficiency or facilitate compliance? The next Part searches for answers to these questions in the legal, economics, and accounting literature on tax compliance and optimal deterrence more generally. The inquiry is limited to economic analysis, and it follows the order in which the degrees of graduation appeared above: aggressiveness, magnitude, culpability,

41. *Id.* § 301.6721-1(f)(3)(i) (as amended in 2014).

42. *See id.* § 1.6662-4(a) (as amended in 2003).

43. Specifically, “substantial” means in excess of the greater of 10% of the correct amount of tax or \$5000, with some further complications. *See id.* § 1.6662-4(b).

44. *See id.* § 1.6662-4(e)(1).

45. *Id.* § 1.6662-4(e)(2).

46. A tax shelter is “(I) a partnership or other entity, (II) any investment plan or arrangement, (III) any other plan or arrangement, if a significant purpose . . . is the avoidance or evasion of Federal income tax.” I.R.C. § 6662(d)(2)(C)(ii) (2012).

effort, detection, and history. I do not claim that these are the only possible axes, but I believe that they are the most important ones as a practical matter. Thus I limit the discussion to these six.

III. EVALUATING GRADUATED SANCTIONS

Multiple axes of penalty graduation do not necessarily make penalty calculations difficult. As one can glean from the U.S. Sentencing Guidelines, these calculations may be quite mechanistic. “For each dollar of tax underpayment, add ten cents,” the rules may say, “for each prior offense, multiply by 1.3; for lack of disclosure, raise to a square,” and so on. In reality, however, simple schemes like this are rarely possible. Aggressiveness, culpability, and effort are vague concepts that may not be defined precisely or applied easily most of the time. Moreover, the history of the Sentencing Guidelines suggests that even the sanctioning characteristics that do lend themselves to a precise definition and predictable application violate our sense of justice, or at least that of the U.S. Supreme Court.⁴⁷ These difficulties, however, are only a small part of the problem with complex sanctions. From a theoretical perspective, each degree of penalty graduation requires an independent investigation and justification. The more degrees there are, the more analysis is needed to evaluate a penalty regime. The following discussion turns to this analysis.

A. *Aggressiveness: Critical in Law; Overlooked in Economics*

Law is often uncertain, and people respond to this uncertainty in different ways. Some stay on the safe side, others come close to the blurry line separating legal and illegal conduct, and there are those who completely disregard the law’s commands. These variations are important in any legal regime, but they are particularly important in tax and other settings where statutory fines depend on the actor’s choice of aggressiveness. Needless to say, one cannot evaluate this penalty structure without having a model of actors responding to legal uncertainty by taking positions of varying legal strength.

Yet the literature has little to offer in modeling legal uncertainty. Although this uncertainty has received more attention in tax than in many other contexts, most economic analysis of tax enforcement ignores legal uncertainty altogether. There is not even a term describing uncertain tax positions. The standard approach in the economic anal-

47. See *United States v. Booker*, 543 U.S. 220, 245 (2005) (holding that mandatory Sentencing Guidelines violate the Sixth Amendment of the U.S. Constitution).

ysis of tax enforcement allows only two choices: evasion and compliance (called "avoidance" by most economists).⁴⁸ While decision-making under uncertainty is at the core of this approach, the uncertainty relates to detection, not the strength of a legal position.⁴⁹

Some work in economics and accounting does incorporate legal uncertainty into tax compliance models. However, most of this work does not interpret legal uncertainty in the way I do here. Several authors conceptualize uncertainty as a random variation of taxable income around the mean.⁵⁰ Their analyses do not incorporate the concept of aggressiveness, do not consider uncertainty-dependent penalties, and do not investigate any specific rules. Moreover, their models operationalize an increase in uncertainty as an increase in a mean-preserving spread.⁵¹ In contrast, a change in aggressiveness changes the mean as well as the variance. Another approach views uncertainty as a taxpayer's lack of knowledge of the tax consequences. This ignorance may

48. See Joel Slemrod & Shlomo Yitzhaki, *Tax Avoidance, Evasion, and Administration*, in 3 HANDBOOK OF PUBLIC ECONOMICS 1423, 1428 (Alan J. Auerbach & Martin Feldstein eds., 2002).

49. The foundational model by Allingham and Sandmo incorporated only detection uncertainty, and the literature mostly followed this approach. See generally Michael G. Allingham & Agnar Sandmo, *Income Tax Evasion: A Theoretical Analysis*, 1 J. PUB. ECON. 323 (1972). Curiously, even though Allingham and Sandmo acknowledged that other forms of uncertainty exist and briefly discussed these other forms, they said nothing about legal uncertainty in that discussion. *Id.* at 324-25.

50. See Paul J. Beck & Woon-Oh Jung, *Taxpayer Compliance Under Uncertainty*, 8 J. ACCT. & PUB. POL'Y 1, 10 (1989); Woon-Oh Jung, *Tax Reporting Game Under Uncertain Tax Laws and Asymmetric Information*, 37 ECON. LETTERS 323, 323-24 (1991); Louis Kaplow, *Accuracy, Complexity, and the Income Tax*, 14 J.L. ECON. & ORG. 61, 72 (1998); Suzanne Scotchmer & Joel Slemrod, *Randomness in Tax Enforcement*, 38 J. PUB. ECON. 17, 19 (1989).

51. See James Alm, *Uncertain Tax Policies, Individual Behavior, and Welfare*, 78 AM. ECON. REV. 237, 238 (1988); Beck & Jung, *supra* note 50, at 10-11; Kaplow, *supra* note 50, at 75; Scotchmer & Slemrod, *supra* note 50, at 19.

be reduced or eliminated by learning the rules or acquiring tax advice.⁵² In contrast, legal uncertainty is often irreducible. In fact, acquiring tax advice may increase it.⁵³ Other economic models of uncertainty are even further removed from this Essay's conceptualization of this term.⁵⁴

A few investigations by economists and accountants do use the term legal uncertainty as I use it here. David Ulph offers a model that includes taxpayers who face uncertain rules and purchase tax schemes of various aggressiveness.⁵⁵ However, one of his model's main drivers—the risk of retroactive legislation—is not a serious concern for U.S. taxpayers.⁵⁶ Other features of the model lead to further difficulties in applying it to real-life tax planning.⁵⁷ Paul Beck, Jon Davis, and Woon-Oh Jung investigate legal uncertainty and variation in tax reporting aggressiveness in a series of articles.⁵⁸ Kate Krause models a

52. See Beck & Jung, *supra* note 50, at 13-14; Kaplow, *supra* note 50, at 74-75, 78; Krause, *supra* note 6, at 399; Suzanne Scotchmer, *Who Profits from Taxpayer Confusion?*, 29 ECON. LETTERS 49, 49-50 (1989). Some of the contributions expressly set aside the investigation of "arguability" (i.e., legal uncertainty) of legal positions. See Scotchmer, *supra*, at 51. Note that uncertainty as lack of knowledge and uncertainty as a random variation around the mean are not mutually exclusive. One can model uncertainty as a random variation with taxpayers capable of reducing the distribution's variance by acquiring information.

53. For instance, a taxpayer may be aware of a "home office" deduction and may think that a "home office" means something like "a room in the house where the taxpayer works when he or she works at home." Asking an expert about this deduction would complicate things quite a bit. To start with, it would introduce the taxpayer to a detailed regulatory scheme in section 280A. While the tax advisor may be an expert in interpreting this section (so that the taxpayer need not master it), the advisor will also explain that some key statutory terms are ambiguous and the guidance from the courts has been far from clear. See 1 BORIS I. BITTKER & LAWRENCE LOKKEN, *FEDERAL TAXATION OF INCOME, ESTATES, AND GIFTS* ¶ 22.6.3 (3d ed. 1999) (discussing the controversy regarding the "principal place of business" term).

54. James Alm, for example, investigates uncertainty that arises due to possible future legislative changes. See Alm, *supra* note 51, at 237, 241. Under the current law, this possibility affects neither the aggressiveness of a particular tax position nor the possible penalties.

55. Ulph uses the term "legal effectiveness" rather than aggressiveness. See David Ulph, *Avoidance Policies—A New Conceptual Framework* 1, 7 (Oxford Univ. Ctr. for Bus. Taxation, Working Paper No. 09/22, 2009).

56. See Ulph, *supra* note 55, at 8-20 (discussing variables p_i and ϕ). Another key driver is the variation in reputational costs. See *id.* at 10. Yet we know very little about the magnitude of these costs and their variation among taxpayers.

57. For instance, the model assumes that the "probability that the tax authority successfully challenge[s] the scheme" does not vary among schemes or taxpayers. *Id.* at 9-10. Not only is this assumption unrealistic, the variation of probability in question is a key factor accounting for variation in aggressiveness of real-life tax positions.

58. See Paul J. Beck et al., *Experimental Evidence on an Economic Model of Taxpayer Aggression Under Strategic and Nonstrategic Audits*, 9 CONTEMP. ACCT. RES. 86 (1992) [hereinafter Beck et al., *Strategic Audits*]; Paul J. Beck et al., *Experimental Evidence on Taxpayer Reporting Under Uncertainty*, 66 ACCT. REV. 535 (1991) [hereinafter Beck et al., *Reporting*].

parameter that may be interpreted as the level of aggressiveness as well.⁵⁹ Lillian Mills, Leslie Robinson, and Richard Sansing present a model where taxpayers of varying aggressiveness face uncertain tax rules.⁶⁰ And Michael Graetz, Jennifer Reinganum, and Louis Wilde investigate the effect of tax advice on decisions of taxpayers facing differing probability that their deductions would be disallowed (which the authors call “exposure”).⁶¹ None of these models, however, investigates aggressiveness as an endogenous variable. Beck and co-authors introduce aggressiveness as a “*prior probability*”⁶² of success and operationalize it in experimental settings by assigning a number reflecting this probability to the subjects.⁶³ Mills and co-authors equate the strength of a position with the taxpayer type, which the taxpayer “observes” as a “realization of a random variable.”⁶⁴ Graetz and co-authors do not allow taxpayers to change their exposure levels.⁶⁵ Krause imposes the same restriction on the levels of a tax position’s ambiguity.⁶⁶

Yet from a lawyer’s perspective, the most important feature of aggressiveness is that it is endogenous. Taxpayers may vary the strength of their positions from certain legality to certain illegality by adjusting

Under Uncertainty]; Paul J. Beck et al., *Tax Advice and Reporting Under Uncertainty: Theory and Experimental Evidence*, 13 CONTEMP. ACCT. RES. 49 (1996) [hereinafter Beck et al., *Tax Advice*]; Paul J. Beck et al., *Taxpayer Disclosure and Penalty Laws*, 2 J. PUB. ECON. THEORY 243 (2000) [hereinafter Beck et al., *Taxpayer Disclosure*]; Beck & Jung, *supra* note 50.

59. See Krause, *supra* note 6, at 400.

60. See Lillian F. Mills et al., *FIN 48 and Tax Compliance*, 85 ACCT. REV. 1721, 1726-27 (2010) (introducing x as the expected tax benefit from the transaction, but also referring to it as the “strength” of a taxpayer’s position, and interpreting $x \geq 0.5$ as a position “for which the taxpayer is more likely than not to prevail”).

61. See Michael Graetz et al., *Expert Opinions and Taxpayer Compliance: A Strategic Analysis* 5 (Cal. Inst. of Tech., Soc. Sci. Working Paper No. 710, 1989).

62. Beck et al., *Taxpayer Disclosure*, *supra* note 58, at 247 (emphasis added).

63. See Beck et al., *Strategic Audits*, *supra* note 58, at 98. For another experimental operationalization of exogenous uncertainty and aggressiveness, see Beck et al., *Reporting Under Uncertainty*, *supra* note 58, at 538 (introducing experimental subjects to income uncertainty as a bingo case with sequentially numbered balls representing particular taxable incomes and varying the number of balls in the bingo cage). Beck and co-authors model the strength of a legal position as the probability that the taxpayer’s income is high (because, for example, a tax deduction may not be properly taken). See Beck et al., *Strategic Audits*, *supra* note 58, at 89. Because their model does not allow that strength (probability) to vary, the authors vary aggressiveness by manipulating the gap between high and low incomes—something they themselves tend to refer to as the “amount at risk” rather than the degree of aggressiveness. See *id.*; see also Beck et al., *Tax Advice*, *supra* note 58, at 49.

64. Mills et al., *supra* note 60, at 1727, 1729.

65. See Graetz et al., *supra* note 61, at 7 (listing a number of strategies available to taxpayers, but not considering a strategy of changing the exposure, n).

66. See Krause, *supra* note 6, at 401 (considering three potential taxpayer responses to uncertainty, but not considering changing $e1$ as a possible additional strategy). Rather, Krause considers how exogenous changes in tax position’s ambiguity affect taxpayer incentives. See *id.* at 404-05.

their actions. For instance, it is unclear what a “substantial”⁶⁷ decline in risk is, but it is abundantly clear that a 99% decline is substantial and a 1% decline is not. Taxpayers may often choose any degree of risk diminution between 100% and zero in designing their tax reduction strategies. Likewise, even if a taxpayer is unsure how much time must pass for the Internal Revenue Service (IRS) to conclude that a later event has followed the earlier one “immediately,”⁶⁸ there is no doubt that a minute-long gap between the two satisfies the test and a year-long gap does not. Again, taxpayers may often choose the length of time separating the two events. Thus, the aggressiveness of many tax positions is endogenous—it is the product of taxpayer’s choice. No work in accounting or economics of tax compliance that I am aware of reflects this feature of aggressiveness.⁶⁹ That is, no model incorporates the case where a change in the taxpayer’s behavior affects the strength of that person’s tax position.⁷⁰

Legal scholars fully appreciate the role of aggressiveness in taxation and taxpayers’ ability to vary it. Their analysis of tax penalties is highly illuminating, but it has significant limitations. Sarah Lawsky suggests that aggressiveness-based graduation of tax sanctions may be appropriate, but her arguments suffer from several problems.⁷¹ First, her model is a narrower version of Louis Kaplow’s model that,

67. I.R.C. § 1092(c)(2)(A) (2012).

68. *Id.* § 351(a).

69. Note that the models interpreting income uncertainty as a random variation around the mean do incorporate endogeneity by allowing taxpayers to reduce uncertainty by purchasing tax advice. *See, e.g.,* Beck & Jung, *Taxpayer Compliance Under Uncertainty*, *supra* note 50, at 13-16. However, a change in uncertainty in these models amounts to a change in the mean-preserving variance of an income distribution, *see id.* at 14, not a change in the mean of a distribution that would correspond to positions of different aggressiveness.

70. James Alm and Mark Cronshaw offer a model that includes a parameter (α) defined as “the probability that a high-income taxpayer reports low (i.e., the probability of noncompliance or cheating).” Mark B. Cronshaw & James Alm, *Tax Compliance with Two-Sided Uncertainty*, 23 PUB. FIN. Q. 139, 144 (1995). Importantly, the taxpayer in the model is free to choose the value of α , making it endogenous. *See id.* It is unclear, however, what this probability corresponds to in real life, that is, *how* a taxpayer may choose this probability.

Aside from an inquiry into legal uncertainty, the tax enforcement literature does address endogenous probabilities. For instance, Yitzhaki considers probability of detection that depends on the amount of evaded income which is chosen by the taxpayer. *See* Shlomo Yitzhaki, *On the Excess Burden of Tax Evasion*, 15 PUB. FIN. Q. 123, 127 (1987). Kaplow investigates the variation in the probability of detection due to the taxpayers’ expenditures on concealing their evasion. *See* Louis Kaplow, *Optimal Taxation with Costly Enforcement and Evasion*, 43 J. PUB. ECON. 221, 230 (1990). These investigations, however, do not link the endogenous uncertainty to the aggressiveness of a tax position. Therefore, they do not shed light on the aggressiveness-based penalty graduation.

71. *See generally* Lawsky, *supra* note 12.

in Kaplow's own view, does not yield any specific prescription for sanctions design.⁷² Second, Kaplow's model is inapplicable in the tax setting because it is built on a foundational assumption that "[i]f and only if an act is harmful is it illegal."⁷³ This assumption is implausible in the tax field.⁷⁴ Third, Lawsky replaces Kaplow's "probability of harm"⁷⁵ with "lawmakers' perceived probability of harm (i.e., lawmakers' estimation of the probability that the transaction would be struck down by a court if reviewed)."⁷⁶ It is unclear how lawmakers may estimate the likely outcomes of future legal decisions regarding yet-unknown tax positions.

Kyle Logue does not investigate a continuous aggressiveness-based variation of sanctions, but he does consider whether penalties should apply to all tax underpayments or only those that cross a particular aggressiveness threshold.⁷⁷ Following the general deterrence literature, Logue refers to penalties that have this feature as "fault-based."⁷⁸ I find this term unfortunate both because it introduces a moralistic overtone into a purely technical analysis and (relatedly) because its use may lead to a confusion between aggressiveness and culpability. In any case, Logue does not reach clear conclusions regarding the desirability of fault-based sanctions.⁷⁹ Mark Gergen also finds fault-based penalties plausible, but only if cross-cutting psychological biases

72. See Louis Kaplow, *Optimal Deterrence, Uninformed Individuals, and Acquiring Information About Whether Acts Are Subject to Sanctions*, 6 J.L. ECON. & ORG. 93, 111-13 (1990).

73. *Id.* at 96.

74. Endless harmful tax-motivated acts are perfectly legal. A worker who reduces his or her work hours to avoid extra taxes, an investor who retains an unwanted appreciated asset to avoid the tax on the gain, an elderly taxpayer who engages in extra consumption in order to avoid the looming estate tax all engage in socially harmful yet perfectly legal activities.

75. See *id.* at 112.

76. Lawsky, *supra* note 12, at 1054.

77. See Logue, *supra* note 6, at 257-64.

78. *Id.* at 241.

79. Moreover, Logue's analysis relies on a problematic concept of "transaction." *Id.* at 279, 280 n.70. The problems with relying on this concept are clear from David P. Hariton, *The Frame Game: How Defining the "Transaction" Decides the Case*, 31 VA. TAX REV. 221, 221-34, 266-70 (2011). Logue is not the only one relying on a transaction-by-transaction evaluation of aggressive tax positions. See, e.g., Mills et al., *supra* note 60, at 1726 (basing the model on "the value of the transaction in absence of the tax benefit").

and diverging subjective evaluations of legal uncertainty affect the outcomes in a particular way.⁸⁰ Furthermore, Gergen's normative framework is unique and emphasizes the value of moderation.⁸¹

Daniel Shavero generally advocates against fault-based penalties (and, necessarily, against aggressiveness-based graduation).⁸² His analysis, however, only explains why a penalty multiplier needed to offset uncertain detection should apply regardless of the degree of legal uncertainty.⁸³ He mentions that it may be desirable to vary penalties based on "whether the transaction, even if potentially legally defensible, has a significant tax avoidance aspect."⁸⁴ However, he does not elaborate, and a plausible interpretation of "significant tax avoidance aspect" as a reference to aggressiveness appears to contradict his earlier conclusion.⁸⁵ In any case, Shavero does not investigate why taxpayers take uncertain positions in the first place, let alone positions of varying aggressiveness.

The most illuminating work on legal uncertainty outside of tax was done by Richard Craswell and John Calfee thirty years ago.⁸⁶ Not much progress has occurred since then. Craswell and Calfee focused on whether legal uncertainty leads to over- or under-deterrence in the presence of an optimal legal rule. Their conclusions are indeterminate, with over-deterrence resulting from some assumptions and under-deterrence from others. Given these findings, and recognizing that socially optimal rules may not be plausibly assumed in tax and many

80. See Gergen, *supra* note 6, at 284.

81. See *id.* at 255.

82. See Shavero, *supra* note 6, at 239-41.

83. *Id.* at 240. Shavero's further claim that a multiplier reflecting detection uncertainty leads to optimal penalties, *id.* at 240, cannot be sustained in the welfarist framework for the reasons I have previously discussed, see Alex Raskolnikov, *Accepting the Limits of Tax Law and Economics*, 98 CORNELL L. REV. 523 (2013). This claim is also questionable in the complete deterrence framework because Shavero does not address the variation of taxpayer's private costs for positions of various aggressiveness.

84. See Shavero, *supra* note 6, at 244.

85. *Id.* Note that "significant tax avoidance aspect" may equally plausibly refer to culpability (the taxpayer's purpose for entering into a transaction or taking a return position) rather than aggressiveness.

86. See John E. Calfee & Richard Craswell, *Some Effects of Uncertainty on Compliance with Legal Standards*, 70 VA. L. REV. 965 (1984); Richard Craswell & John E. Calfee, *Deterrence and Uncertain Legal Standards*, 2 J.L. ECON. & ORG. 279 (1986).

other settings, it should be clear why Craswell and Calfee's research has not led to many conceptual advances, including in the tax enforcement literature.⁸⁷

In sum, people often face uncertain rules. Legal uncertainty is not random. It may not be eliminated by learning the law or soliciting expert advice. Instead, actors facing legal uncertainty may vary the aggressiveness of their positions by adjusting their actions. The analysis of legal uncertainty and the incentives it creates is central to thinking about aggressiveness-based penalty graduation. The explicit link between statutory tax fines and the tax position's aggressiveness makes this analysis even more important in the tax setting. Yet the literature has had very limited success in modeling legal uncertainty and analyzing aggressiveness-based sanctions. I model this uncertainty and make some progress toward understanding rational decision-making under uncertain, non-optimal legal rules in related work, including in a joint project with Scott Baker.⁸⁸ Yet clearly, much more needs to be done in thinking about aggressiveness-based penalty graduation.

B. Magnitude: Clear Insights, Attainable Improvements

In contrast with aggressiveness, magnitude-based variation of sanctions follows easily from the basic model of tax enforcement and, more generally, from the theory of complete (or absolute) deterrence. Using tax as a convenient example, the basic argument is simple and intuitive. Taxpayer's incentives in choosing the magnitude of an underpayment are obvious: the greater the magnitude, the greater the taxpayer's gain. In a world without legal uncertainty (the world that we may properly assume for the purposes of investigating graduation based on magnitude alone), every tax underpayment is illegal. If we posit that all illegal acts are undesirable (a big assumption that generally underlies the tax enforcement and complete deterrence literatures and that I do not question here), we would want to eliminate all of them.⁸⁹ Denying all gains from tax evasion eliminates the incentive to evade, so a sanction equal to the private gain (the tax saved) assures compliance. The same logic applies to theft, fraud, and any

87. The tax-specific inquiries by Gergen, Lawsky, Logue, and Shaviro just discussed post-date Craswell and Calfee's work but find no way to build on their analysis.

88. See Alex Raskolnikov, *Probabilistic Compliance*, 34 YALE J. ON REG. (forthcoming 2017), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2731356; Scott Baker & Alex Raskolnikov, *Illusory Risk Preferences* (working paper on file with author).

89. Of course, this conclusion changes once the costs of eliminating taxpayers' gains are considered.

other offense analyzed in the complete deterrence framework with its gain-based sanctions.⁹⁰ The greater the gain, the greater the sanction—this is magnitude-based graduation.

All of this is well known, uncontroversial, and consistent with the actual sanctions calculated as a percentage of the tax due. But it does not explain a further graduation where this percentage increases with the magnitude of the underpayment. To my knowledge, this extra degree of graduation has been neither analyzed nor justified.

This shortcoming may be remedied. One only needs to replace the standard model's fixed penalty coefficient with a variable coefficient that is a function of the tax underpayment or income understatement. This change will lead to somewhat more complicated math. But most results currently available in the literature can probably be restated and reinterpreted taking this additional complication into account. In fact, a recent article has already started down this path.⁹¹ I by no means suggest that no interesting insights will emerge.⁹² After all, tax scholars know well that a seemingly slight change in the penalty calculation may lead to an important change in the model's prediction.⁹³ But there is little doubt that the magnitude-based graduation of a kind found in the Internal Revenue Code can be readily incorporated into the existing models. Whether the revised models will support the specific magnitude-dependent sanctions found in the tax law and some other enforcement regimes is another matter.

C. Culpability: A Long-Standing Challenge

The picture is less bright when we turn to the next axis of graduation—culpability. Here, tax enforcement scholars are in large company. The entire law and economics literature has struggled to explain why so many legal rules incorporate the mental state of a putative offender, be it the *mens rea* requirement of the criminal law, the “willful breach” doctrine of the contract law, or the references to knowledge, purpose, and good faith in a variety of regulatory regimes from environmental to securities regulation, corporate governance, and taxation. It is revealing that the chapter on public enforcement of law in

90. See, e.g., Keith N. Hylton, *Punitive Damages and the Economic Theory of Penalties*, 87 GEO. L.J. 421 (1998); Jeffrey S. Parker, *Criminal Sentencing Policy for Organizations: The Unifying Approach of Optimal Penalties*, 26 AM. CRIM. L. REV. 513, 552 (1989).

91. See Mark D. Phillips, *Deterrence vs. Gamesmanship: Taxpayer Response to Targeted Audits and Endogenous Penalties*, 100 J. ECON. BEHAV. & ORG. 81, 85 (2014).

92. Mark Phillips' article introduces a model that is dramatically more complicated than the standard model of tax evasion, see *id.*, so it is difficult to isolate the effects of making the penalty rate a function of the evaded amount.

93. I refer, of course, to Shlomo Yitzhaki's adjustment to the seminal Allingham-Sandmo model. For a summary, see Slemrod & Yitzhaki, *supra* note 48, at 1430.

the Handbook of Law and Economics makes no mention of the offender's mental states despite inquiring into such subjects as social norms and fairness considerations.⁹⁴

In a certain sense, the economic importance of a taxpayer's mental state is obvious to any public finance economist. The fundamental cost of taxation—its excess burden—depends on that mental state. If a taxpayer decides to work an hour less without taking taxes into account, no excess burden arises; otherwise it does. But this basic insight does not come close to justifying the culpability-based penalty graduation. All sorts of tax-motivated acts are perfectly legal.⁹⁵ In some cases, such as a tax-motivated reduction in the work effort, outlawing tax-motivated behavior is simply impossible.⁹⁶ In other instances, such as corporate inversions, making tax-driven transactions illegal is possible. Yet it is often not done in practice, and it is unclear whether it should be done in many cases.⁹⁷ Moreover, the basic argument about excess burden loses much of its force if the tax system under consideration is not close to the optimal one. Pretty much every real tax system fits this description.⁹⁸ In sum, the economic analysis of tax enforcement sheds little light on the culpability-based penalty graduation, at least at present.

D. Effort: Some Findings, Few Clear Results

Tax penalties also vary based on a taxpayer's effort to understand the law, including by obtaining legal advice. A taxpayer who "fails to make a reasonable attempt to ascertain the correctness of a deduction" that seems too good to be true is subject to a negligence penalty.⁹⁹ A taxpayer who "does not exercise reasonable diligence to determine the correctness of a return position" is penalized for disregard of rules or regulations.¹⁰⁰ On the other hand, if a taxpayer obtains advice of a qualified professional, that taxpayer is often viewed as having "good cause" to underpay taxes, no matter how aggressive the offending tax

94. See Polinsky & Shavell, *supra* note 6. For an argument that intent plays a key role in the economic analysis of a particular category of socially undesirable acts, see Raskolnikov, *supra* note 27.

95. Here I address taxes enacted to raise revenue rather than to regulate conduct (i.e., Pigouvian taxes).

96. I have called this the "undeterrability problem." See Raskolnikov, *supra* note 83, at 543.

97. Corporate inversions, for instance, may be reducing an inefficient corporate income tax.

98. For an expanded discussion, see Raskolnikov, *supra* note 83, at 566-89.

99. Treas. Reg. § 1.6662-3(b)(1)(ii) (as amended in 2003).

100. *Id.* § 1.6662-3(b)(2).

position happens to be.¹⁰¹ In other words, lack of effort leads to penalties, and evidence of effort protects from penalties, especially if that effort manifests itself through obtaining expert advice. That, at least, is the basic scheme.

But there are complications. First, taxpayers may use reliance on expert advice as a defense against sanctions only if the reliance is reasonable.¹⁰² If a taxpayer knows enough about tax to realize that the advice is too good to be true, the penalty protection is off. Ignorance is, indeed, bliss in this case. Second, tax advisors are subject to their own sanctions.¹⁰³ A recent trend has been to regulate tax advisors more stringently and to make some forms of advice more expensive.¹⁰⁴ Assuming the advisors pass some of their costs to the clients, these developments create a disincentive to obtain advice. Third, a taxpayer is not liable for criminal (and perhaps even civil) tax fraud unless that taxpayer violates a “known legal duty.”¹⁰⁵ A good faith subjective belief that no such duty (to pay tax) exists—no matter how unreasonable—is a complete defense.¹⁰⁶ The resulting incentive to *not* know the law is obvious. In sum, the U.S. tax system provides a set of complicated and inconsistent incentives to understand the law. But there is no doubt that sanctions depend on this effort.

Does economic theory support such effort-based penalty graduation? The good news is that, unlike for aggressiveness- and culpability-based graduation, models of resolving legal uncertainty through learning do exist. The bad news, however, is that the models’ implications are inconclusive.

Paul Beck and Woon-Oh Jung find that taxpayer incentives to purchase advisory services increase with tax rate, penalty rate, and audit probability (for realistic audit rates).¹⁰⁷ These findings do not tell us whether compliance or welfare is likely to increase with the purchase of legal advice. Suzanne Scotchmer concludes that if the government can base its audit policies on taxpayer’s receipt of advice, it may (or may not) be optimal for taxpayers to resolve some—but never all—uncertainty.¹⁰⁸ In a related paper, Scotchmer finds that if penalties and audit probabilities do not depend on whether tax advice is sought, the

101. See SALTZMAN & BOOK, *supra* note 23, ¶ 7B.03.

102. See Treas. Reg. § 1.6664-4(b)-(c)(as amended in 2003).

103. I.R.C. § 6694 (2012).

104. See generally David Weisbach & Brian Gale, *The Regulation of Tax Advice and Advisers*, 130 TAX NOTES 1279 (2011).

105. Cheek v. United States, 498 U.S. 192, 201 (1991).

106. See BITTKER & LOKKEN, *supra* note 53, ¶¶ 114.6, 114.9 (civil fraud and criminal fraud).

107. Beck & Jung, *supra* note 50, at 15-16.

108. See Scotchmer, *supra* note 52, at 53-54, 54 fig.2.

government revenue may (or may not) go down when taxpayers seek advice, but social welfare is likely to go up because taxpayers will bear less risk.¹⁰⁹ Given the significant problems with evaluating welfare gains from adjusting the actual tax rules and sanctions,¹¹⁰ even the latter finding is uncertain.

Several articles investigate the role of tax preparers in a game-theoretic setting. Beck, Davis, and Jung describe a signaling model in which a taxpayer's decision to obtain legal advice conveys unique information to the IRS.¹¹¹ The relationship between advice-seeking and government revenue is ambiguous, however, and the assumptions used to identify this relationship are strong.¹¹² Graetz, Reinganum, and Wilde study a game involving taxpayers who may take uncertain positions, tax advisors who may not only resolve the legal uncertainty but protect taxpayers from penalties by issuing tax opinions, and a revenue-maximizing tax agency.¹¹³ They reach interesting results with very limited practical significance.¹¹⁴ They also discuss inconclusive findings of related research by Jennifer Reinganum and Louis Wilde.¹¹⁵ Nahum Melumad and colleagues investigate the deductibility of fees paid for tax advice and conclude that "in spite of the simplicity of the setting considered, the efficiency implication of allowing the [deduction] . . . is rather ambiguous."¹¹⁶

In a more recent work, Kate Krause investigates the problem facing a taxpayer deciding whether to take a tax credit while being unsure

109. Suzanne Scotchmer, *The Effect of Tax Advisors on Tax Compliance*, in 2 TAXPAYER COMPLIANCE 182, 184 (Jeffrey A. Roth & John T. Scholz eds., 1989). The conclusion is subject to many caveats and is reached while assuming that advice is costless. See *id.* at 186-89.

110. See Raskolnikov, *supra* note 83, at 582-85.

111. Paul J. Beck et al., *The Role of Tax Practitioners in Tax Reporting: A Signalling Game* (Univ. of Ill. at Urbana-Champaign, Faculty Working Paper No. 89-1578, 1989), <https://www.ideals.illinois.edu/bitstream/handle/2142/30116/roleoftaxpractit1578beck.pdf?sequence=2>.

112. The authors assume that both the tax agency and tax advisors know the true tax liability and that the taxpayers who hire advisors never conceal evasion from them and never choose to file their own returns inconsistently with the tax advice received. *Id.* at 4-5. All these assumptions strengthen the information content of the signal provided to the government by the presence of an advisor—a key feature of the model.

113. See Graetz et al., *supra* note 61.

114. For instance, one of their results obtains if the tax agency audits all returns with risky positions; another if taxpayers are evenly distributed with respect to the likelihood that the deduction would be allowed on audit; and yet another depends on conditioning audits on the presence of a tax opinion (something the IRS cannot do because these opinions are almost never disclosed on the return and are often protected by attorney-client privilege). *Id.* at 3.

115. See *id.* at 1-2.

116. Nahum D. Melumad et al., *Should Taxpayers Be Subsidized to Hire Third-Party Preparers? A Game-Theoretic Analysis*, 11 CONTEMP. ACCT. RES. 553, 555 (1994).

about eligibility and aware of potential IRS errors.¹¹⁷ She concludes that the IRS may (or may not) maximize its revenue by incentivizing some taxpayers to become informed.¹¹⁸ As is the case with Scotchmer's analysis, several assumptions weaken this already equivocal conclusion.¹¹⁹ Kaplow considers whether incentives to acquire information and resolve uncertainty about true taxable income are likely to be socially excessive, in a sense of exceeding the incentives of uninformed taxpayers.¹²⁰ He finds that they are if the penalty exceeds a fine based on the well-known multiplier (something that almost never happens in practice).¹²¹ Otherwise, the incentives may be excessive or not.¹²² Limited empirical research suggests that involving an accountant or a tax attorney in return preparation increases tax underpayments significantly.¹²³ None of this suggests that we should penalize taxpayers for failing to learn the tax law and for declining to hire advisors.

Finally, an effort to understand the law may affect future tax compliance: once a taxpayer understands a rule in a given tax year, the taxpayer knows that rule for all future years. Are effort-based penalties justified by these benefits of greater knowledge? To answer this question, we need to decide whether knowledge of the law is socially desirable. Here, tax is different from most other regulatory regimes.¹²⁴ These other regimes aim to induce actors to respond to the incentives that the regimes create. If a given regulatory regime is socially desirable, so is the knowledge of this regime by its subjects. Tax law also creates incentives, but these are distortions that efficiency-minded policymakers should try to minimize.¹²⁵ Thus it is not obvious that we should incentivize taxpayers to understand the tax law.

David Weisbach and Kaplow each elaborate on this intuition.¹²⁶ Weisbach's analysis proceeds at a high level of generality. He considers

117. See Krause, *supra* note 6, at 396.

118. *Id.* at 408, 410-11.

119. These include the assumption that the IRS is indifferent between revenue collected from ineligible taxpayers and eligible taxpayers taxed due to an IRS mistake, *see id.* at 406, and the assumption that taxpayers always follow the law despite imperfect detection (once they learn what the law requires, that is), *see id.* at 398.

120. See Kaplow, *supra* note 50, at 61.

121. Given probability of detection p , that multiplier in the tax setting is equal to $(1-p)/p$. For the analysis, *see id.* at 75.

122. *See id.*

123. See Brian Erard, *Taxation with Representation: An Analysis of the Role of Tax Practitioners in Tax Compliance*, 52 J. PUB. ECON. 163, 164-68, 166 tbl.1, 191 (1993).

124. Again, I am not discussing Pigouvian taxes here.

125. See Raskolnikov, *supra* note 83, at 543; David A. Weisbach, *Is Knowledge of the Tax Law Socially Desirable?*, 15 AM. L. & ECON. REV. 187, 187 (2013).

126. See Kaplow, *supra* note 50, at 70-77; Weisbach, *supra* note 125, at 187.

uniform commodity taxes, non-linear labor income taxes, and tax shelters in a stylized form. Even at that level, he finds it difficult to reach clear conclusions, especially if taxes are not assumed to be optimal. Kaplow's results are similarly indeterminate.¹²⁷ Whether knowledge of the actual federal income tax is socially desirable remains an open question. So incentives to acquire this knowledge do not appear to support penalties based on the effort to understand the law.

What can we conclude about the effort-based penalty graduation? Taxpayers' knowledge of the law presents the government with a conundrum. Greater knowledge may be desirable if it leads to greater compliance, though even in this case the costs may outweigh the benefits. Greater knowledge is probably undesirable if it helps taxpayers to reduce their taxes by taking more aggressive positions or finding opportunities to game the rules, though even here some ambiguity remains.¹²⁸ Some of the complexity of the real-life knowledge-related rules may well be due to this conundrum. But economic research has not approached the level of detail where this conundrum is relevant. For now, economic models provide little support for effort-based graduation of sanctions.

E. Detection: A Continuing Inquiry

Detection uncertainty is at the center of the economic analysis of deterrence. It features prominently in Gary Becker's seminal analysis of crime¹²⁹ and in Michael Allingham and Agnar Sandmo's foundational model of tax evasion.¹³⁰ The penalty adjustment needed to account for detection uncertainty is well known: the so-called damages multiplier.¹³¹ It is also well known that the standard multiplier has a fundamental flaw. The probability of detection often increases with the aggressiveness of the violation, making any fixed multiplier non-optimal.¹³² For instance, it is both intuitive and highly likely that egregious speeding is more likely to be detected than a slight speed limit violation. For that reason, the optimal deterrence analysis suggests

127. See Kaplow, *supra* note 50, at 72-73.

128. Gaming clearly inefficient taxes may be welfare-increasing after all.

129. See Gary S. Becker, *Crime and Punishment: An Economic Approach*, 76 J. POL. ECON. 169, 176-79, 176 n.12 (1968).

130. See Allingham & Sandmo, *supra* note 49, at 326-27, 327 n.2, 330-32.

131. In the general optimal deterrence literature where the optimal sanction equals the external harm, the multiplier is the inverse of the probability of detection, *p*. See Richard Craswell, *Deterrence and Damages: The Multiplier Principle and Its Alternatives*, 97 MICH. L. REV. 2185, 2186 (1999). In tax evasion models, the payment (including tax) reflecting the detection uncertainty is the tax multiplied by $(1-p)/p$. See Slemrod & Yitzhaki, *supra* note 48, at 1430; Shlomo Yitzhaki, *A Note on Income Tax Evasion: A Theoretical Analysis*, 3 J. PUB. ECON. 201, 201 (1974).

132. See Craswell, *supra* note 131, at 2193-94.

that fines for the former should be lower than for the latter—the exact opposite of what actually occurs. This is a persisting puzzle in the law and economics literature.

Here, however, tax analysts get a rare break. In contrast with speeding and many other offenses, aggressiveness and ease of detection are not related in tax. Very aggressive tax positions (such as a failure to report tip income) may be almost undetectable while less aggressive positions (such as deductions from known tax shelters) may be relatively easy for the government to find. Thus, the main optimal deterrence complication with accounting for detection uncertainty does not arise in the tax setting. Plenty of other complications exist, however.

Probability of detection varies dramatically from one tax return item to another. Income understatements are certain to be identified if income is subject to information reporting but are much more difficult to detect otherwise. Undeclared income not subject to information reporting is less detectable than many deduction overstatements, which themselves vary in detectability. For a given deduction, the size of the overstatement affects the ease of detection. Items subject to mandatory disclosure have a different probability of detection than items that are not required to be disclosed. The detection probability varies among the disclosed items as well, depending on whether the required disclosure is on a case-by-case or the aggregate basis.¹³³

These nuances have received some attention in the literature, but progress has been slow. Over two decades ago, Steven Klepper and Daniel Nagin offered a model of taxpayer decision-making based on the assumption that the perceived probability of detection varies across different lines of a tax return.¹³⁴ They found that actual taxpayers strongly respond to these variations.¹³⁵ This line of research is promising, but it has seen only a limited development thus far.¹³⁶ Similarly limited is the analysis of the relationship between the detection likelihood and the size of the tax understatement—whether absolute¹³⁷ or relative.¹³⁸ Recent articles introduce a detection probability that

133. The case-by-case disclosures are required for the so-called listed and reportable transactions. See Treas. Reg. § 1.6011-4(b) (as amended 2010). The aggregate disclosure is required for uncertain tax items reportable on Schedule UTP. See generally J. Richard Harvey Jr., *Schedule UTP - Why So Few Disclosures?*, 139 TAX NOTES 69 (2013).

134. See Steven Klepper & Daniel Nagin, *The Anatomy of Tax Evasion*, 5 J.L. ECON. & ORG. 1, 2 (1989).

135. See *id.* at 22.

136. For one of a very few relatively recent papers, see Jorge Martinez-Vazquez & Mark Rider, *Multiple Modes of Tax Evasion: Theory and Evidence*, 58 NAT'L TAX J. 51 (2005).

137. See Yitzhaki, *supra* note 70, at 123-24.

138. See Alex Raskolnikov, *Crime and Punishment in Taxation: Deceit, Deterrence, and the Self-Adjusting Penalty*, 106 COLUM. L. REV. 569, 571-72 (2006).

varies with income into the basic tax evasion model¹³⁹ and study the effects of mandatory¹⁴⁰ and voluntary disclosure of uncertain tax positions.¹⁴¹ There is some empirical evidence supporting the recent models.¹⁴²

Overall, there is a solid economic foundation for incorporating the detection variations into the analysis of sanctions. Actual tax penalties reflect the basic theoretical point that difficult-to-detect violations should be subject to higher penalties. More research is needed to make the models more realistic and to produce more nuanced empirical estimates. But no conceptually insurmountable problems appear to exist, and the continuing scholarly interest in the subject is encouraging.

F. History: A Persistent Puzzle

Finally, most sanctions increase with the number of previous offenses. From the so-called three-strikes laws adopted by many U.S. states¹⁴³ to the special chapter of the U.S. Sentencing Guidelines dedicated to the subject,¹⁴⁴ history-based graduation of sanctions is perhaps the most widespread and widely known feature of punishment regimes. Equally well known in the law and economics literature is the fact that history-based graduation is very difficult to explain. In the words of Winand Emons who has studied this issue for some time, "At the very best the literature . . . has shown that under rather special circumstances escalating penalty schemes may be optimal."¹⁴⁵ At the same time, plausible arguments suggest that optimal sanctions should decline with an increase in the number of previous offenses, especially

139. See Henrik Jacobsen Kleven et al., *Unwilling or Unable to Cheat? Evidence from a Tax Audit Experiment in Denmark*, 79 *ECONOMETRICA* 651, 652-54 (2011).

140. See Mills et al., *supra* note 60, at 1722-24.

141. See Beck et al., *Taxpayer Disclosure*, *supra* note 58, at 245-47; Lisa De Simone et al., *When Are Enhanced Relationship Tax Compliance Programs Mutually Beneficial?*, 88 *ACCT. REV.* 1971, 1975-76 (2013).

142. See Paul J. Beck & Petro Lisowsky, *Tax Uncertainty and Voluntary Real-Time Tax Audits*, 89 *ACCT. REV.* 867, 898-99 (2014).

143. Thomas B. Marvell & Carlisle E. Moody, *The Lethal Effects of Three-Strikes Laws*, 30 *J. LEGAL STUD.* 89, 89 (2001).

144. See U.S. SENTENCING GUIDELINES MANUAL ch. 4 (U.S. SENTENCING COMM'N 2015).

145. Winand Emons, *A Note on the Optimal Punishment for Repeat Offenders*, 23 *INT'L REV. L. & ECON.* 253, 254 (2003).

for regulatory offenses such as tax law violations.¹⁴⁶ Most likely, explanations for the history-based graduation lie outside the economic analysis of law.

IV. CONCLUSION

What follows from identifying six degrees of sanction graduation and reviewing their economic rationales? Sanctions can be highly complex. Many real-life sanctions *are* quite complex. This complexity is underappreciated in legal discourse and under-conceptualized in economic theory. If one thinks that sanctions create real-world incentives, there is much to examine and explain.

It may be tempting to suggest that behavioral law and economics is the most promising area of future research. I am somewhat skeptical. Once we start incorporating the nuances of human psychology into the rational actor model, it becomes implausible to analyze sanctions at large. For example, both speeding fines and prison sentences depend on the aggressiveness of a violation. But it is quite obvious that people think about these two sanctioning regimes in very different terms. So it is both understandable and appropriate that the most recent comprehensive volume on behavioral law and economics does not have a chapter on the general behavioral analysis of sanctions.¹⁴⁷ In contrast, insights from the standard economic theory are more likely to apply across many different legal regimes. Thus, the payoffs from developing further insights using the basic rational actor model are significant.

One of the payoffs is to identify areas where sanctions complexity may be unnecessary, or at least excessive. Overly complicated sanctions are socially costly just as overly complicated rules are. In fact, sanctions are particularly costly because they apply to violations of many different legal rules. So we should pay special attention to sanctions complexity. Does it make sense to have a penalty that varies along five different dimensions? Why have fines that give rise to incentives that we do not clearly understand, let alone intend? Recognizing six degrees of sanctions graduation—both in theory and in practice—illuminates our thinking about these and many other questions of legal punishment.

146. See David A. Dana, *Rethinking the Puzzle of Escalating Penalties for Repeat Offenders*, 110 YALE L.J. 733, 737-39 (2001).

147. See THE OXFORD HANDBOOK OF BEHAVIORAL ECONOMICS AND THE LAW (Eyal Zamir & Doron Teichman eds., 2014). In contrast, this volume has chapters dedicated to ten different substantive legal regimes as well as to regulation (at large), judicial decision-making, and plea bargaining.

