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DO TAX COMPLIANCE ROBOTS FOLLOW THE LAW?

SUSAN C. MORSE*

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* Angus G. Wynne, Sr. Professor of Civil Jurisprudence, University of Texas School of Law. Many thanks for helpful comments to Leslie Book, Kathleen Delaney Thomas and Dennis Ventry, and to participants at presentations at the AI and Taxation Symposium, Ohio State Moritz College of Law, March 2019 and at University of Texas School of Law, September 2019.

I. Introduction

Do automated or artificial intelligence systems follow the law? What design choices can the law make to encourage legal compliance by robots? Tax law has some experience with these questions.

This Essay describes experience with algorithmic tax compliance robots, such as TurboTax or H&R Block Online. It argues that tax compliance robots sometimes follow the law and sometimes break the law. In the current environment, these results mostly emerge from market incentives, since tax compliance robots generally have not been charged with direct liability for legal violations.

Tax compliance robots are useful targets for law because of their centralized implementation of legal decisions. Influencing how a tax compliance robot applies the law can affect many taxpayers at once. But the legal design choices might be different in different situations.

Algorithmic tax compliance robots, such as TurboTax, have long implemented the tax law using systems that make centralized legal decisions without direct user control. These robots generally follow the government's interpretation of the substantive tax law. But they appear to break other laws, like taxpayer confidentiality protections and other taxpayer data protections required by the Free File agreement with the IRS. They also do little to encourage taxpayer honesty.

Marketplace incentives explain this difference. Sometimes, following the law increases the profit or revenue of a tax compliance robot like TurboTax. Sometimes, breaking the law increases such a robot's profit or revenue.

For instance, tax compliance robots rarely bear direct legal liability for mistakes of substantive tax law (despite advertised guarantees). But they say that substantive tax law mistakes will produce adverse market reaction, such as a loss of customers and revenue. They appear to avoid providing taxpayers with overly favorable positions. Instead,

they prepare tax returns in a way that minimizes the risk of government audit.

On the other hand, tax compliance robots refuse responsibility for users' factual inputs. Some software design features may subtly encourage lies, for instance the underreporting of income or the overreporting of deductions. There appears to be no mechanism, market or otherwise, that imposes costs on, say, Credit Karma when the users of Credit Karma lie.

Tax compliance robots also appear to violate laws relating to their use of taxpayer data, including requirements found in the so-called "Free File" agreement with the IRS. Under this agreement, tax compliance software companies agree to provide free filing services to many taxpayers. But pending class action lawsuits as well as lawsuits brought by the state of California charge Intuit and H&R Block with illegal upselling and other violations.¹

Part II of this Essay first notes that tax compliance robots are centralized sources of legal decisions. Their business models are characterized by economies of scale. As others have also observed, this makes tax compliance robots an important feature of the modern U.S. tax system and a promising target for regulation. Because centralization makes enforcement easier, it should encourage tax compliance robots to follow the law – although it appears that they do so only sometimes.

Part III illustrates how tax compliance robots follow the substantive tax law in easy cases and in hard cases. In easy cases, they often incorporate government guidance verbatim. In hard cases, robots appear to choose solutions that minimize audit risk.

Part IV explains that market incentives can play out in different ways for different issues of legal compliance. Sometimes market incentives

¹ See *infra* notes 23-24.

encourage legal violations by aligning a tax compliance robot against both the government and the taxpayer, as in the case of taxpayer data violations. Sometimes, the market encourages legal violations through the tacit cooperation of the tax compliance robot and the user, as in the case of user fraud. Sometimes, the market may produce overcompliance with the law, as when it encourages a tax compliance robot to adopt risk-averse interpretations of substantive tax law.

II. Centralization and Economies of Scale

a. Centralization and Tax Compliance Robots: Prior Work

Prior study of tax compliance robots has revealed several themes. One question relates to whether tax compliance robots reduce taxpayer time and effort required to file.² Another strand of inquiry relates to whether tax compliance robots support greater complexity in the tax law.³ Another theme deals with the more general possibility that automation will shift resources to capital investment as compared to human capital, and thus exacerbate the existing tax system's tendency to undertax capital relative to labor.⁴

This essay relates most directly to yet another issue raised in previous scholarship about tax compliance robots. This theme has to do with such robots' legal decisions. In other words, how should the law shape and direct the centralized legal decisions made by such robots, and how should it address mistakes made when robots get the law wrong? Tax compliance robots are a promising target for legal interventions.

² See, e.g., Joseph Bankman, *Using Technology to Simplify Individual Tax Filing*, 61 NAT'L TAX J. 773, 774 (2008) (noting simplification advantage of reducing taxpayer filing costs and particular advantage of government-prepared returns); John L. Guyton, et al., *The Effects of Tax Software and Paid Preparers on Compliance Costs*, 58 NAT'L TAX J. 439, 446 (2005) (finding based on survey data that tax software decreased compliance costs relative to using a paid preparer and that "the net reduction in compliance burdens depends on how one values taxpayers' time").

³ Lawrence Zelenak, *Complex Tax Legislation in the TurboTax Era*, 1 COLUM. J. TAX L. 91, 92 (2010) (arguing that the capacity of computer software programs facilitates unprecedented computational complexity in the tax law).

⁴ See, e.g., Orly Mazur, *Taxing the Robots*, 46 PEPP. L. REV. 277 (2019); Jay A. Soled & Kathleen DeLaney Thomas, *Automation and the Income Tax*, 10 COLUM. J. TAX L. 1 (2018).

In many cases, if “the government induces [tax compliance robots] to modify their ... software, users have no choice about whether to adopt this modification or not.”⁵

This essay focuses on tax compliance robots that are algorithmic, meaning that they execute a series of programmed instructions. TurboTax and similar programs use programmed logic to produce tax law results. Some emerging tax compliance robots feature more advanced machine learning and artificial intelligence technology,⁶ which may present additional concerns about explainability and transparency.⁷

But even a compliance robot built on mere algorithms or programmed logic, rather than on machine learning or artificial intelligence, presents a special opportunity for the law. Centralization should assist enforcement,⁸ relative to a system populated by many human tax preparers. The reason is that the government is more likely to discover an error if it is repeated across many returns. The prediction does not require the government to marshal artificial intelligence tools or other

⁵ See LAWRENCE LESSIG, CODE AND OTHER LAWS OF CYBERSPACE 106 (1st ed. 1999) (identifying “closed code” as a good target for regulation because it is “unmovable, and unmoving”).

⁶ These include Blue J Legal, which uses machine learning techniques to apply case law precedent to users’ fact situations and predict how a court would decide between employee and independent contractor classification, or how a court would decide whether a transaction had economic substance. See Benjamin Alarie, et al., *Using Machine Learning to Predict Outcomes in Tax Law*, at 1 (Dec. 15, 2017) (unpublished manuscript) (available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2855977) (describing the Blue J Legal project). Other work has sought to translate the Code’s natural language into a “default logic representation.” See Marcos Pertier, Sarah Lawsky, Erik Hemberg & Una-May O’Reilly, *Parsing Statute Law as Default Logic Through Automatic Semantic Parsing*, PROCEEDINGS OF ASAIL 2017. Perhaps future creative artificial intelligence systems might search for new tax shelters using the primary source material of the Internal Revenue Code.

⁷ See Cary Coglianese & David Lehr, *Transparency and Algorithmic Governance*, 71 ADMIN. L. REV. 1, 12-14 (2019) (arguing that law can nevertheless address such explainability concerns).

⁸ The general assumption is that compliance with the law is a good thing. Considering whether compliance is a bad thing because the law is imperfect or wrong falls outside the scope of this paper.

cutting edge technology.⁹ It is simply an observation that more identical mistakes are more likely to be detected.

Some prior work recommends leveraging tax compliance robots' central role to help increase user take-up of programs like the earned income tax credit.¹⁰ Other work suggests fixing common mistakes in the implementation of software compliance programs by auditing or directly requiring changes in the decisions made by tax compliance robots.¹¹ Another line of research considers the use of tax compliance robots to increase user honesty through programming tweaks.¹²

Other recommendations would explicitly extend "tax preparer"¹³ requirements to tax compliance robots.¹⁴ Similarly, "Circular 230"

⁹ See generally Bryan Camp, *Tax Administration as Inquisitorial Process and the Partial Paradigm Shift in the IRS Restructuring and Reform Act of 1998*, 56 FLA. L. REV. 1, 53 (2004) (noting that a provision of the 1998 Act, codified at I.R.C. § 7612, prevents the IRS from obtaining source code software in most cases).

¹⁰ See, e.g., Jacob Goldin, *Tax Benefit Complexity and Take-Up: Lessons from the Earned Income Tax Credit*, 72 TAX L. REV. 59, 95 (2018) (arguing that "assisted preparation methods" reduce the user's exposure to "tax benefit complexity" on issues such as the earned income tax credit).

¹¹ See *infra* sources cited at notes 53-55 (describing recommendations of the National Taxpayer Advocate).

¹² See Joseph Bankman, Clifford Nass, & Joel Slemrod, *Using the "Smart Return" to Reduce Evasion and Simplify Tax Filing*, 69 TAX L. REV. 459, 460 (2016) (outlining recommendations relating to increasing the psychological cost of lying and designing customized conversation tools); Leslie Book, et al., *Insights from Behavioral Economics Can Improve Administration of the EITC*, 37 VA. TAX REV. 177, 234-37 (2018) (suggesting tailored and self-relevant fact prompts for software used to prepare earned income tax credit returns); Kathleen Delaney Thomas, *The Psychic Cost of Tax Evasion*, 56 B.C. L. REV. 617, 648-50 (2015) [hereinafter Delaney Thomas I] (recommending measures in electronic returns that would increase the "psychic cost" of taxpayer dishonesty); Kathleen DeLaney Thomas, *User-Friendly Taxpaying*, 92 IND. L. J. 1509, 1552 (2017) [hereinafter Delaney Thomas II] (recommending procedural simplification reforms such as pre-filing tax returns).

¹³ There is a debate as to whether tax compliance robots should be treated as tax preparers. See I.R.C. § 7701(a)(36) (excluding from return preparer a person who only provides "mechanical assistance"). Courts' rejection of the so-called "TurboTax Defense" suggests that they are not tax preparers. See Rodney P. Mock & Nancy E. Shurtz, *The TurboTax Defense*, 15 FLA. TAX REV. 443, 484 (2014). However, a Revenue Ruling suggests that tax compliance robots could be tax preparers in some cases. See Rev. Rul. 85-187, 1985-2 C.B. 338 (1985) (treating a firm that created a software program as a tax preparer on facts that included the firm's "substantive determination" with respect to a depreciation deduction).

¹⁴ See Jay A. Soled & Kathleen DeLaney Thomas, *Regulating Tax Return Preparation*, 57 B.C. L. REV. 151, 192-02 (2017) (suggesting that tax compliance robots such as TurboTax should be treated as tax return preparers). Tax preparers face numerous responsibilities under

requirements applicable to those who practice before the IRS might be extended to tax compliance robots.¹⁵ These proposals would impose liability for negligent or willful violations, including mistakes of law and participation in user fraud. They would also expand taxpayers' ability to avoid penalties by invoking the defense that a tax compliance robot gave a certain legal answer. These recommendations, too, are supported in part by the fact that tax compliance robots have a centralized role in the tax system.

Current law has not adopted these proposals. Thus, the law now rarely imposes direct liability on tax compliance robots for legal violations. Nevertheless, centralization may encourage tax compliance robots to follow the law. A compliance robot's success is driven by the number of customers, or users, it attracts. In other words, the business model relies on economies of scale. But if a compliance robot makes errors, it will experience negative economies of scale. The more users the robot has – or, in other words, the more centralized its decisions -- the more likely the errors will be found out. And even if the law does not impose direct liability on tax compliance robots for errors of law, the market may penalize such robots for legal errors.

Centralization may encourage tax compliance robots to follow the law, but they do not always do so. Tax compliance robots provide a good

the Internal Revenue Code. *See, e.g.*, I.R.C. § 6694(a) (2015) (imposing penalties on tax preparers for certain understatements of tax liability, for instance if an undisclosed position lacks substantial authority and the preparer “knew (or reasonably should have known) of the position”); I.R.C. § 6695(g) (2018) (imposing on tax preparers diligence requirements relating to eligibility for benefits including the earned income tax credit); I.R.C. § 6701 (2015) (imposing on tax preparers civil liability for aiding and abetting fraudulent understatements of tax).

¹⁵ *See* NAT'L TAXPAYER ADVOCATE, EARNED INCOME TAX CREDIT: MAKING THE EITC WORK FOR TAXPAYERS AND THE GOVERNMENT, 3 SPECIAL REPORT TO CONGRESS 24-25, n. 106 (2019) (detailing IRS efforts to persuade preparers to voluntarily subject themselves to Circular 230 after litigation concluded that the IRS lacked the statutory authority to impose minimum standards for tax preparers) (citing *Loving v. I.R.S.*, 917 F. Supp. 2d 67 (D.D.C. 2013), *aff'd*, 742 F.3d 1013 (D.C. Cir. 2014)). *See generally* MICHAEL I. SALTZMAN & LESLIE BOOK, I.R.S. PRACTICE AND PROCEDURE ¶¶ 1.09, 7B.19, 7B.21 (2nd ed. 2002 & supp. 2019) (listing and explaining duties for such practitioners, civil penalties for persons who practice before the service, and sanctions for violating Circular 230) (citing 31 C.F.R. § 10.50). Prohibited behavior under Circular 230 includes “willfully assisting or suggesting to a client to violate any revenue laws of the United States” and “willfully disclosing tax return information in a way not authorized by the Code or contrary to a court order.”

comparative case study because these robots break some laws, like the upselling bans and taxpayer confidentiality requirements contained in the FreeFile agreement with the IRS. Tax compliance robots also may subtly encourage user fraud. On the other hand, tax compliance robots appear to follow the substantive tax law, and even entrench government interpretations in their software. Why is there a difference? Market incentives provide the answer.

b. Breaking Procedural Tax Law Makes Money

As an example of tax compliance robot lawbreaking, consider the so-called “Free File” agreement between tax compliance robot makers (including Intuit) and the government.¹⁶ Tax compliance companies including H&R Block and Intuit (the maker of TurboTax) first entered into an agreement about free electronic filing with the government in 2002.¹⁷ It consists of a memorandum of understanding in which the government pledges not to establish a free tax filing or auto-filled return program for many taxpayers, and in exchange H&R Block, Intuit and other companies agree to provide free tax filing for a large majority of taxpayers, namely those with adjusted gross income “equal to or less than 70 percent of all United States (U.S.) taxpayers.”¹⁸ This income threshold translates to \$66,000 in 2019.¹⁹

¹⁶ See, e.g., Dennis J. Ventry, *The Failed Free File Program Should Be Reformed, Not Codified*, 160 TAX NOTES 317 (2018) (detailing upselling abuses, privacy violations, and deceptive removal of arbitration and other legal rights by companies such as Intuit and H&R Block in connection with their obligation to provide free filing alternatives to low-income taxpayers).

¹⁷ See Free Online Electronic Tax Filing Agreement (October 20, 2002), <https://www.irs.gov/pub/irs-utl/2002-free-online-electronic-tax-filing-agreement.pdf> (agreement between the Internal Revenue Service and the Free File Alliance, LLC); see also Gerald H. Goldberg, *Comment*, in HENRY J. AARON & JOEL SLEMMOD, THE CRISIS IN TAX ADMINISTRATION 138, 139 (2004) (“Can a hybrid government-private sector approach, now in evidence for 2003 with the IRS and the Free File Alliance ... offer a model that meets taxpayer expectations? It is noteworthy that these expectations focus not only on no-cost filing options but also on options that do not require the disclosure of confidential financial and tax information to private sector companies.”).

¹⁸ Eighth Memorandum of Understanding on Service Standards and Disputes Between the Internal Revenue Service and Free File, Incorporated § 1.2 (Oct. 31, 2018) [hereinafter MOU], <https://www.irs.gov/pub/irs-utl/Eight%20Free%20File%20MOU.pdf>.

¹⁹ *About the Free File Program*, I.R.S., <https://www.irs.gov/e-file-providers/about-the-free-file-program> [<https://perma.cc/L3LW-PX23>].

The MOU, now in its 8th amended iteration, places a list of requirements on the tax filing companies. These include promises to faithfully direct taxpayers to free software instead of upselling and promises to keep taxpayer information confidential. For instance, programs “must clearly list their free customer service options” through their landing page.²⁰ Also, if a taxpayer is ineligible for a provider’s Free File alternative, the taxpayer is supposed to be “directed back to the IRS Free File Landing Page as the first and most prominent alternative action so that they may immediately consider other Free File offers.”²¹

Persuasive evidence, some gathered by ProPublica,²² indicates that TurboTax and H&R Block Online violated the FreeFile agreement’s upselling provisions. Several class action lawsuits allege breach of contract and violation of consumer protection, false advertising, and unfair competition law.²³ The Los Angeles City Attorney has also filed two lawsuits, one against H&R Block and one against Intuit, alleging a violation of California’s unfair competition statute.²⁴

Other evidence suggests that tax compliance robots violated other rules incorporated into the FreeFile MOU, such as requirements to protect taxpayer confidentiality as a tax preparer would.²⁵ For instance, company use of taxpayer data for broad and unspecified purposes is made a condition of service, which is prohibited by incorporated

²⁰ MOU, *supra* note 18, at § 4.15.4.

²¹ MOU, *supra* note 18, at § 4.19.2(iii).

²² See Justin Elliott, *TurboTax Deliberately Hid Its Free File Page from Search Engines*, PROPUBLICA, (Apr. 26, 2019), <https://www.propublica.org/article/turbotax-deliberately-hides-its-free-file-page-from-search-engines>.

²³ See, e.g., Class Action Complaint and Demand for Jury Trial, *Sinohui v. Intuit Inc.*, No.5:19-cv02546 (N.D. Ca. May 12, 2019); First Amended Complaint, *Olosoni v. HRB Tax Group, Inc.*, No.3:19-cv-0361-SK (N.D. Ca. Aug. 9, 2019).

²⁴ See, e.g., Complaint, *People v. Intuit Inc.*, No. 19STCV15644 (Superior Ct. of Calif, County of Los Angeles, May 6, 2019) (alleging violation of California Law Unfair Business & Professions Code § 17200 et seq.).

²⁵ See MOU, *supra* note 18, at § 4.12 (providing that “Members shall only use or disclose the tax return data Members collect ... in accordance with the provisions of Section 7216 of the Code.”).

regulatory provisions.²⁶ Also, consent waivers are broader than the law allows.²⁷

Upselling produces revenue. So does the use of customer data. The annual reports of tax compliance robots' business say this plainly. H&R Block explains: "There can be no assurance that we will be able to ... effectively ensure the migration of clients from our free tax service offerings to those for which we receive fees."²⁸ Intuit states: "We also provide additional customer benefits by utilizing customer data available to us through our existing offerings. If we are not able to develop and clearly demonstrate the value of new or upgraded products or services to our customers, or effectively utilize our customers' data, our revenues may be harmed."²⁹ Tax compliance robots' incentive to earn revenue and profit are directly at odds with the MOU's restrictions on upselling and requirements to safeguard taxpayer data.

c. Compliance Robots Do Not Encourage Honesty

Another feature of tax compliance robots that may make them more profitable is that they do not police user lies. The mechanism here is different – it presumably involves taxpayers' willingness to pay for a product that will help them reduce their tax bill by allowing them to adjust factual inputs. Studies show that some features of tax compliance software systems, such as the constant display of a 'tax due' bar, may encourage taxpayers to lie, for instance by overstating business expenses or understating cash income.³⁰ This effect has been

²⁶ See Ventry, *supra* note 16, at 322-25.

²⁷ *Id.*

²⁸ H&R BLOCK., 2018 ANNUAL REPORT 23, 55 (2018), <https://investors.hrblock.com/static-files/4293dedf-951d-4541-b4a8-ac80daded417>.

²⁹ INTUIT INC., FISCAL 2018 FORM 10-K 13 (2018), [https://s23.q4cdn.com/935127502/files/doc_financials/annual/2018-Annual-Report-on-Form-10-K-\(PDF\).pdf](https://s23.q4cdn.com/935127502/files/doc_financials/annual/2018-Annual-Report-on-Form-10-K-(PDF).pdf).

³⁰ See Soled & Thomas, *supra* note 14, at 180-81 (summarizing results).

reported particularly if a change reduces a tax liability;³¹ not so much if it increases a refund due.³²

It would be possible to change the design of tax compliance robots so as to encourage taxpayer honesty. Measures like more pre-filling of tax returns might reduce the effort taxpayers must expend in order to tell the truth on their returns.³³ Tax preparation software could “force taxpayers to lie by commission, rather than omission” and could require attestations of honesty at more salient points in the tax preparation process.³⁴ It could provide users with fraud alerts prompted by repeated deletion and re-entry of figures.

But it makes sense that tax compliance robots do not police user fraud, because the market and the IRS treat users’ factual inputs as specific to that user. No legal or market penalty falls on TurboTax if its software design subtly encourages a taxpayer to underreport cash income or exaggerate charitable deductions. Neither the market nor the law constrain tax compliance robots’ decisions about how to request and receive factual inputs. They lack an incentive to encourage honesty.

d. Following Substantive Tax Law Apparently Makes Money

Yet when it comes to substantive tax law – as opposed to the law governing taxpayer data use or taxpayer fraud – tax compliance robots do seem to follow the law. Here, the profit-maximizing strategy

³¹ See William D. Brink & Lorraine D. Lee, *The Effect of Tax Preparation Software on Tax Compliance: A Research Note*, 27 BEHAV. RES. ACCT. 121, 131 (2015) (explaining that subjects reported considerably less cash tip income when a tax-due bar displayed).

³² See Nicholas C. Hunt & Govind S. Iyer, *The Effect of Tax Position and Personal Norms: An Analysis of Taxpayer Compliance Decisions Using Paper and Software*, 41 ADVANCES ACCT’G 1, 5 (2018) (finding that when taxpayers observe a refund-due bar, “even low personal norm taxpayers ... report amounts that are not significantly different from high personal norm taxpayers”).

³³ See DeLaney Thomas II, *supra* note 12, at 1539-44 (explaining different levels of taxpayer effort).

³⁴ Bankman, Nass, & Slemrod, *supra* note 12, at 460 (outlining recommendations relating to increasing the psychological cost of lying and designing customized conversation tools); see also Delaney Thomas I, *supra* note 12, at 648-50 (2015) (recommending measures in electronic returns that would increase the “psychic cost” of taxpayer dishonesty); DeLaney Thomas II, *supra* note 12, at 1553-35 (recommending third-party reporting).

appears to be to adopt safe legal interpretations, which minimize the chance of audit and potential liability or reputational harm. There is a parallel with other centralized enforcement frameworks in tax law, such as third-party reporting and withholding,³⁵ the reportable transactions framework aimed at tax shelter transactions,³⁶ and the TEFRA partnership audit model. In each case, a centralized market player bears responsibility for making legal decisions.

The centralization of a tax compliance robot may make enforcement easier, but as the above examples of violations of taxpayer data law and taxpayer fraud law show, centralization does not always produce legal compliance. Yet tax compliance robots do seem to follow the substantive tax law. They behave as if they will suffer costs if they offer substantive tax law interpretations that are too aggressive.

One might think that tax compliance robots follow substantive tax law because user contracts cause such robots to bear the costs of noncompliance. Some tax compliance robots assume contractual responsibilities for tax filing mistakes, typically those that result “solely” from “calculation” errors.³⁷ But these contracts do not amount to much. The accuracy guarantees are subject to exclusions, such as the lack of coverage if an error results from taxpayer inputs; limitations, such as dollar limits of \$10,000 or less; and arbitration

³⁵ Third-party reporting and withholding has an overwhelming effect on collections. Only 1% of income subject to “substantial” third-party reporting and withholding, including wage income, goes unreported. This compares to 19% of income subject to “some” reporting, such as partnership income; and as much as 63% of income subject to “little or no” reporting, such as farm income and nonfarm sole proprietor income. See IRS, TAX GAP ESTIMATES FOR TAX YEARS 2008-2010 5 (2019), available at <https://www.irs.gov/pub/newsroom/tax%20gap%20estimates%20for%202008%20through%202010.pdf>.

³⁶ See e.g., I.R.C. §§ 6700, 6701 (imposing reporting responsibilities and, in certain circumstances, large penalties directly on “tax shelter promoters” and “material advisers” who develop and market schemes to reduce tax).

³⁷ See, e.g., *Intuit Software End User License Agreement: TurboTax Desktop Software – Tax Year 2018*, INTUIT TURBOTAX (B)(4) (Aug. 2018), <https://turbotax.intuit.com/corp/license/prior-year/desktop.jsp> [<https://perma.cc/PJ76-5NWU>] (explaining TurboTax Accurate Calculation Guarantee).

clauses.³⁸ Other commentators have suggested that the guarantees are unlikely to expose tax compliance robots to material liability.³⁹ The information available in company reports seems consistent with this prediction. In 2018, H&R Block reported about \$2.4 billion in tax preparation fees and royalties and only a \$9.4 million liability related to estimated losses under its accuracy guarantee program.⁴⁰

Instead, the reason that tax compliance robots follow the tax law has to do with the market. Market or customer expectations apparently impose costs on tax compliance robots if they adopt aggressive legal interpretations. Part of what a tax compliance robot tries to sell is the peace of mind that the government won't audit tax returns that the robot prepares.

In other words, tax compliance robots sell accuracy and expertise.⁴¹ Their product is compliance and legality.⁴² If they program the law aggressively, taxpayers may be audited, causing the robots' reputation

³⁸ See, e.g., *id.* at (A)(13) (requiring arbitration); see also Mock & Shurtz, *supra* note 13, at 490-94 (describing H&R Block and TurboTax software).

³⁹ See, e.g., Mock & Shurtz, *supra* note 13, at 494 (arguing that "the utility of these accuracy guarantees is questionable" and that when software errors are made "through no fault of the taxpayer, the accuracy-related penalty should be waived by the IRS"). However the IRS generally does not waive penalties when the taxpayer raises this so-called "TurboTax Defense." See *id.* at 494-505 (analyzing cases).

⁴⁰ H&R BLOCK, *supra* note 28, at 23, 55 (2018), <https://investors.hrblock.com/static-files/4293dedf-951d-4541-b4a8-ac80daded417> (reporting revenue breakdown and estimated losses due to accuracy guarantee).

⁴¹ See, e.g., H&R BLOCK, *supra* note 28, at 12-13 ("The unpredictable nature, timing and effective dates of changes to tax laws and tax forms can result in condensed development cycles for our tax services and product offerings because our clients expect high levels of accuracy.... [S]ignificant problems with such offerings or the manner in which we provide them to our clients may harm our revenue, results of operations, and reputation."); INTUIT INC., *supra* note 29, at 19 (explaining that errors could also affect our reputation, the willingness of customers to use our products, and our financial results"); Mock & Shurtz, *supra* note 13, at 463-64 (describing Intuit and H&R Block advertising spending);.

⁴² One small lab study compared TurboTax results with results "determined by consensus of two tax professors and one tax instructor" and reported that using TurboTax improved taxpayer compliance for both novice and experienced tax preparers. Tracy Noga & Vicky Arnold, *Do Tax Decision Support Systems Affect the Accuracy of Tax Compliance Decisions?*, 3 INT'L J. ACCT. INFO. SYS. 125, 130-133 (2002).

and profit to suffer.⁴³ On the other hand, if they program the law to minimize the risk of audit, then the taxpayer may sometimes pay more in taxes than required by the law, but the government will not object to the mistake and the taxpayer may not notice it.

With respect to substantive tax law, tax compliance robots comply – that is, they arrange their systems to “confor[m] to applicable rules and regulations.”⁴⁴ But there is no reason to assume that tax compliance robots comply for the sake of compliance. Rather, they presumably comply in order to maximize profit. As to how they comply, as discussed further in Part II, it appears that tax compliance robots follow government guidance to the letter in easy cases and adopt positions that minimize audit risk in harder cases.

III. How Tax Compliance Robots Follow the Law

a. Easy Case Compliance: Follow Government Guidance

Tax compliance is more straightforward where there are clear ex ante rules. If the tax compliance robot does what government guidance says, the government will accept its legal interpretations. This is not tautological, since government guidance could get the law wrong.

⁴³ Cf. Susan C. Morse, *Tax Compliance and Norm Formation Under High-Penalty Regimes*, 44 CONN. L. REV. 675, 682-85 (2012) (suggesting that the reputation market for large banks provides an incentive for such banks to comply with a tax reporting rule, if enough banks comply to start a “virtuous circle” of signaling).

⁴⁴ GEOFFREY PARSONS MILLER, *THE LAW OF GOVERNANCE, RISK MANAGEMENT AND COMPLIANCE* 3 (2014). On one hand, definitions of compliance tend to be more expansive than that offered here because they consider the problem within the context of a “complex institution” that complies through internal control mechanisms. *Id.* at 137. On the other hand, other definitions of compliance differ from that offered here because they state the goal of compliance as adhering to law or norms, rather than minimizing the risk of loss. The advantage of stating the goal as minimizing the risk of loss is that it provides a better tool to understand hard cases, such as cases where compliance with one law makes compliance with another law impossible, cases where any interpretation of an unclear law results in a risk of loss, or cases where the benefits of noncompliance materially exceed the costs of noncompliance.

However, the IRS generally stands by its guidance when auditing returns.⁴⁵

The prediction that tax compliance robots generally follow IRS guidance is consistent with available evidence. Automated tax products like TurboTax import the content of IRS forms and instructions in their software.⁴⁶ A study of the process of implementing the 2017 tax statute shows that the legislative drafters design statutes with tax software firms, rather than human readers, in mind.⁴⁷

Sometimes, a tax compliance robot's legal error is discovered. An example is the apparently missing self-employment tax prompt exposed when Timothy Geithner was nominated to serve as Treasury Secretary in 2008.⁴⁸ In that case, the software apparently promptly fixed its mistake.⁴⁹

⁴⁵ See I.R.S., CHIEF COUNSEL NOTICE CC-2003-014, FOLLOWING PUBLISHED GUIDANCE IN ADVICE AND LITIGATION (May 8, 2003) (requiring that litigation legal positions must be consistent with published guidance including "final regulations, temporary regulations, revenue rulings, revenue procedures, IRB notices, and announcements"); see generally DAVID M. RICHARDSON, JEROME BORISON & STEVE JOHNSON, CIVIL TAX PROCEDURE 31-32 (2d ed. 2008) (discussing the goal of IRS consistency, the internal review processes designed to achieve it, and some case law holding the government to its position as stated in, for instance, a Revenue Ruling).

⁴⁶ See Joshua D. Blank & Leigh Osofsky, *Simplexity: Plain Language and the Tax Law*, 66 EMORY L. J. 189, 229-31 (2017) (giving examples of TurboTax repeating government guidance verbatim).

⁴⁷ See Shu-Yi Oei & Leigh Osofsky, *Constituencies and Control in Statutory Drafting: Interviews With Government Tax Counsels*, 104 IOWA L. REV. 1291, 1314, 1316-18 (2019) (reporting that 26 lengthy interviews with statutory drafters revealed that statutes were not written for the audience of taxpayers themselves) ("A couple of interviewees indicated that the primary goal was to articulate a statute so that software companies such as TurboTax could effectively write a program that implemented the rule that could be used by a large number of taxpayers.").

⁴⁸ Mock & Shurtz, *supra* note 13, at 486.

⁴⁹ See Mock & Shurtz, *supra* note 13, at 486-490 (describing prompt fixes related to self-employment tax omission, disallowance of gambling losses, and treatment of real estate activity under passive activity loss rules). Perhaps tax software providers also take note of mistakes discovered by diligent law professors. See Bryan Camp, *Lesson for Tax Day: When Tax Prep Software Gets It Wrong*, TAXPROF BLOG (April 15, 2019), https://taxprof.typepad.com/taxprof_blog/2019/04/lesson-for-tax-day-when-tax-prep-software-gets-it-wrong.html (describing H&R Block software's failure to ask whether tuition amounts

When tax compliance robots conform to government guidance, they replicate the weaknesses of that guidance, since the robots' motive is not to improve the quality of the law, but rather to maximize profit and revenue. A tax compliance robot complies in order to avoid government challenge, on the theory that avoiding audit will maintain customer trust and revenue. If the government's guidance is overgenerous to taxpayer, the robot's programming is overgenerous to taxpayers.⁵⁰ If the government's guidance is not generous enough, the robot's programming is under-generous as well.⁵¹

b. Examples of Errors in Favor of the Government

Work done by the National Taxpayer Advocate has revealed instances where tax compliance robots appear to err in favor of the government.⁵² These errors are consistent with the idea that tax compliance robots prefer to minimize audit risk. Perhaps they also suggest that some tax compliance robots prefer to avoid the costs of programming the correct implementation of new and complex provisions of law.

In several contexts, tests run by the National Taxpayer Advocate show that some tax compliance robots fail to prompt taxpayers for information that could allow them to claim valuable deductions or

were funded out of § 529 plans for purposes of calculating the American Opportunity Tax Credit).

⁵⁰ For example, tax compliance robots treat loyalty points earned by employees as nontaxable, presumably because I.R.S. Announcement 2002-18, 2002-10 I.R.B. 621 states the government's decision not to enforce I.R.C. § 61 with respect to frequent flyer miles earned by employees. The stronger statutory interpretation is that such employee miles and similar loyalty points are taxable. Lawrence Zelenak, *Custom and the Rule of Law in the Administration of the Income Tax*, 62 DUKE L. J. 829, 831-32 (2012).

⁵¹ For example, TurboTax repeats IRS guidance that states that refinancing points can be amortized over the loan term, despite conflicting case law. See Blank & Osofsky, *supra* note 46, at 211, 230, (comparing TurboTax guidance to case law) (citing *Huntsman v. Commissioner*, 905 F.2d 1182 (8th Cir. 1990), *rev'd*, IRS Action on Decision 1991-02 (Feb. 11, 1991) (stating that IRS would not follow decision outside the 8th Circuit but recommending against request for certiorari).

⁵² Thanks to Professor Leslie Book for bringing the details of this work to my attention.

other benefits.⁵³ For example, in 2006, some tax compliance robots did not include prompts to allow users to claim increased tax benefits for casualty losses resulting from Hurricane Katrina.⁵⁴ As another example, in 2015, when the tax system began to administer a portion of the Affordable Care Act, some software programs did not prompt taxpayers for information, such as facts supporting eligibility for a hardship exemption, that would have reduced their health insurance-related payment obligation.⁵⁵

c. Frame Factual Inputs to Reduce Audit Risk

One small test carried out by this author also suggests that sometimes tax compliance robots limit users' choices. Perhaps they do so both to avoid the necessity of programming a complex set of factual inputs, and/or to produce a legal position less likely to be audited. The small test devised for this illustration in this essay assumed a taxpayer who receives payments in exchange for donating blood plasma. These payments are gross income,⁵⁶ subject to debates about basis recovery and capital asset status.⁵⁷ But available authorities do not sort out related issues such as whether such payments should be treated as self-employment income⁵⁸ for purposes of the self-employment tax⁵⁹ and/or the earned income tax credit.⁶⁰

⁵³ See 1 TAS ANN. REP. 75 (2018) [hereinafter 2018 TAS Rep.] (reporting that some Free File tax compliance robots did not support Schedule C depreciation and/or claims for casualty loss or disaster relief).

⁵⁴ *Hearing on Tax Return Preparation Options for Taxpayers Before the Sen. Comm. on Fin.*, 109th CONG. 13-14 (2006) (statement of Nina E. Olson, Taxpayer Advocate, Taxpayer Advocate Serv.) (reporting that TurboTax and six other sites correctly calculated Hurricane Katrina casualty loss benefits but that twelve other sites did not calculate the benefits correctly and instead imposed generally applicable limitations which had been statutorily suspended for Hurricane Katrina losses).

⁵⁵ See 1 TAS ANN. REP. 170 n.20 (2015) [hereinafter 2015 TAS Rep.] .

⁵⁶ *Green v. Comm'r*, 74 T.C. 1229, 1232-34 (1980).

⁵⁷ *Cf. Lary v. United States*, 787 F.2d 1538, 1540 (11th Cir. 1986) (denying charitable deduction for donated blood under an analysis that turned on capital asset treatment and explaining that "[t]axpayers have proffered no evidence as to *any* basis in the donated blood" or the holding period of the property).

⁵⁸ See Larry Zelenak, *The Body in Question: The Income Tax and Human Body Materials*, 80 L. & CONTEMP. PROBS. 37, 80-82 (2017) (explaining that the author's recommended treatment of human body materials as capital assets would result in no application of the self-

A “recommended answer” from a TurboTax employee does not reveal any of this nuance.⁶¹ It advises reporting the income from plasma donations as if reported on a 1099-MISC.⁶² The instructions to IRS Form 1099-MISC provide that “[a]mounts shown may be subject to self-employment tax.”⁶³ Yet a TurboTax user who follows the answer’s instructions will discover that the income is not reported as self-employment income or earned income.

If the TurboTax miscellaneous income treatment of payments for blood plasma always increased tax liability, one could call it the “safer” legal position for that reason. But it doesn’t. The miscellaneous income treatment might result in higher income tax than would result from treating blood plasma as a capital asset, but this treatment also decreases self-employment tax liability. One might think that a safer, more audit-proof approach would therefore suggest to taxpayers that payments received for blood plasma count as self-employment income.

Yet if TurboTax engaged users in the question of whether payments for plasma were self-employment income, it would get into earned income tax credit territory.⁶⁴ In some cases, blood plasma donations treated as self-employment income might allow a taxpayer to claim

employment tax, but that statements in case law regarding the treatment of donations as inventory or services suggest that donors should pay the self-employment tax).

⁵⁹ The self-employment tax includes Social Security and Medicare portions and is imposed at a total rate of 15.3%. See I.R.C. § 1401 (2014). Half of the tax—the amount equivalent to the employer’s portion—is deductible above the line. I.R.C. § 164(f) (2017).

⁶⁰ “Earned income” for purposes of the earned income tax credit includes net earnings from self-employment, as defined in I.R.C. § 1402(a), and is not reduced by the I.R.C. § 164(f) deduction for the employer portion of self-employment taxes. I.R.C. § 32(c)(2) (2015); I.R.S., U.S. DEP’T OF TREASURY, PUBLICATION 596: EARNED INCOME CREDIT 7, 18 (2019).

⁶¹ Bs.ford & Deeee, Plasma Donation as Taxable Income, Intuit Turbo: Real Money Talk (June 7, 2019, 2:55 PM), <https://ttlc.intuit.com/questions/2342656-plasma-donation-as-taxable-income> [<https://perma.cc/AT92-SMG7>].

⁶² *Id.*

⁶³ I.R.S., U.S. DEP’T OF TREASURY, OMB No. 1545-0115, FORM 1099-MISC (2019).

⁶⁴ Cf. Michelle Lyon Drumb, *Those Who Know, Those Who Don’t, And Those Who Know Better: Balancing Complexity, Sophistication, and Accuracy on Tax Returns*, 11 PITT. TAX REV. 113, 150-51 (2013) (explaining the Tax Court’s rejection of a good faith defense based on TurboTax software).

earned income tax credit benefits,⁶⁵ and EITC audit rates are high.⁶⁶ Suggesting that a user might claim additional EITC benefits likely carries a higher chance of controversy, and so the high EITC audit rate may favor the decision to frame blood plasma payments as miscellaneous, not self-employment, income.

Of course, it is impossible to know exactly why the blood plasma hypothetical works out as it does when it is tested in TurboTax. Perhaps the miscellaneous income recommendation resulted from the unreviewed work of a single TurboTax employee. It may not have involved any larger consideration of audit risk. In other words, there is no proof that the answer was chosen because it reduces audit risk. Nevertheless, that speculation is consistent with the other small test run for purposes of this essay. The second test, described below, involves the allocation of second-home expenses.

d. Allow Non-IRS Approach if No Chance of Government Challenge

In contrast, another small test by this author suggests that sometimes a tax compliance robot faced with uncertainty does give taxpayers a choice about what position to take. TurboTax does this, for instance, with respect to allocating mortgage interest and property taxes between, on one hand, personal deductions or, on the other hand, above-the-line deductions against rent received for use of a second home.⁶⁷ The program explains that the “IRS Method” allocates these taxes pro rata based on the number of days rented divided by the total number of days rented and used, while the “Tax Court Method”

⁶⁵ Taxpayers in the EITC phase-in range (for instance, with income not exceeding \$14,570 assuming two or three children in 2019, see Rev. Proc. 2018-57) have credit percentages of 34%, 40% or 45%. I.R.C. § 32(b)(1) (2015). In this range, the EITC advantage would exceed the self-employment tax disadvantage of treating a blood plasma donation income as self-employment income.

⁶⁶ See 2015 TAS Rep., *supra* note 55, at 249 (“EITC audits make up 35 percent of all IRS audits despite the fact that EITC returns account for only 19 percent of all returns filed.”).

⁶⁷ See I.R.C. § 163(h) (2018) (allowing mortgage interest itemized deduction); I.R.C. § 164(a) (2017) (allowing state and local taxes as itemized deduction).

allocates these taxes based on the number of days rented divided by the number of days in the year.⁶⁸

The IRS Method benefits some taxpayers; the Tax Court Method benefits other taxpayers.⁶⁹ TurboTax defaults to the IRS Method, which presumably eliminates the risk of audit on that legal issue. Yet it does not insist that taxpayers follow that approach. This departs from the program's usual approach of following the government's guidance.

The software's decision on this point can be explained by the strength of the authority supporting the Tax Court Method. In the early 1980s, the Ninth Circuit and the Tenth Circuit each upheld the Tax Court Method and invalidated a contrary proposed Treasury regulation.⁷⁰ Then, a 1990 internal IRS communication refused to raise the issue again in litigation,⁷¹ which suggests that the government would not challenge the Tax Court method on audit. Thus this small test suggests that when a tax compliance robot gives a user this choice about expense allocation, it does not sacrifice the system goal of minimizing audit risk.

⁶⁸ A pop-up window in the program explains, "The Tax Court allows a different allocation formula for interest and taxes than the one the IRS describes in Publication 527. Under the Tax Court formula, interest and taxes are allocated on a daily basis, that is, the rental portion is the ratio of days rented to the number of days in the year. Under the IRS formula, interest and taxes are allocated in the ratio of days rented to days used. The Tax Court ratio results in a smaller amount of interest and taxes allocated to the rental property." (software on file with author).

⁶⁹ The IRS Method uses a smaller denominator and thus would allocate more mortgage interest and property tax expenses to the rental income. This is advantageous for a taxpayer if the rental income is large enough to absorb all of the rental deductions as above-the-line expenses. But if the rental deductions exceed the rental income, it may be more advantageous for the taxpayer to claim the mortgage interest and property tax deductions as personal deductions.

⁷⁰ *Bolton v. Comm'r*, 694 F.2d 556, 564-65 (9th Cir. 1982); *McKinney v. Comm'r*, 732 F.2d 414, 416 (10th Cir. 1983); *Income Tax: Deductions for Business Use or Rental of Dwelling Unit*, 45 Fed. Reg. 52399 (proposed Aug. 7, 1980).

⁷¹ I.R.S., U.S. DEP'T OF TREASURY, CC:TL-8915-90, NON DOCKETED SERVICE ADVICE REVIEW (1990) (addressed to "District Counsel Philadelphia" from "Assistant Chief Counsel (Tax Litigation))" ("Because of the adverse decisions in the Tax Court and in the Ninth and Tenth Circuits, and because the regulation upon which the Service's position is based has not been finalized, we suggest you do not pursue this matter [of allocating interest and property taxes according to IRS method] at this time.").

IV. Implications for Legal Design

a) Control and Penalties

The description here of compliance robots suggests that sometimes they may break the law, as with taxpayer confidentiality and data law incorporated into the Free File agreement. Sometimes they sidestep or claim little involvement with the law, as with the laws prohibiting taxpayer fraud. Sometimes they follow the law or even overcomply, as with substantive tax law.

The law faces at least two questions when it comes to regulating tax compliance robots. One question is control. To what extent will the law control or direct the decisions taken by the robot? Another question is penalties. If a tax compliance robot acts illegally, should and will it be penalized under the law?

The case study in this paper reveals a diversity of experience with respect to tax compliance robots. In the current environment, where very little direct legal liability has attached to any violation of law by a tax compliance robot, such robots follow some laws and break others. The market works with the law in some cases, like substantive tax law compliance. The market works against the law in other cases, like taxpayer data law compliance. The control and penalty choices the law makes for tax compliance robots might take these market factors into account.

In cases where market forces encourage robots to violate the law, tighter control and/or larger penalties can bring compliance robots into line. But where market forces prompt robots to comply or overcomply with the law, penalizing robots for undercompliance is likely to decrease the quality of the law. One can observe compliance robot outcomes influenced by important non-legal factors such as the market in which the robot operates. Because these non-legal factors have different impacts in different situations, legal design might respond differently depending on the context. If the market encourages legal

violations, control and/or punishment is an appropriate response, but if the market encourages compliance, then control and/or punishment is less appropriate.

b) Addressing Taxpayer Data Violations Under Free File

Recall that algorithmic tax compliance robots such as TurboTax appear to violate taxpayer data provisions in the FreeFile agreement. This can be explained because, first, the taxpayer data provisions of the Free File agreement have not been enforced and, second, breaking taxpayer data law increases the revenue of tax compliance robots.⁷² In this case, the law faces a market that produces legal violations. Legal design solutions might increase control of compliance robots and/or penalties for robots' violations of law. The legal design choices include (but are not limited to) regulation and enforcement by the government.

The tax compliance robot, its user, and the government are three participants in the drama of tax compliance set out here. In the case of these violations of taxpayer data law, the tax compliance robot's interest in breaking the law to increase revenue is set against the user's interest and the government's interest in protecting taxpayer data. One implication is that the law might look to either users or the government for enforcement.

Current law under the Free File agreement provides a framework for government to increase its control of or penalties imposed on Free File violations. The existing Free File agreement between the government and software providers prescribes extreme remedies for breach – removal of a member from the Free File alliance or termination of the contract. It thus gives the government a broad ability to negotiate when a counterparty firm breaches the agreement, because the government can threaten to cancel the agreement, develop its own software, and compete with the tax preparation firms.⁷³ Various political and

⁷² See *supra* text accompanying notes 22-29.

⁷³ See INTUIT INC., *supra* note 29, at 13 (“If the Free File Program were to be terminated and the IRS were to enter the software development and return preparation space, the federal

institutional reasons might explain why the government has been unwilling to use this negotiation threat to force the Free File companies to faithfully serve the goals of the program. One reason may be that tax administrators are not used to having to force such firms to comply with the law.

One possibility to address the lack of enforcement with respect to taxpayer data is simply to call for the government to do its job. Several commentators have made this point,⁷⁴ and properly so. But it is also important to acknowledge that legal design options for controlling and penalizing compliance robots need not require government to make the first move. Users might also detect and publicize violations of law. It turns out that there are several avenues. Some are extralegal, such as media attention. Some work through legislative processes, including Congressional oversight. Other avenues involve litigation, whether through qui tam or whistleblower suits⁷⁵ or through impact litigation. As described above, several class action and government lawsuits claim that alleged Free File data and confidentiality violations break state consumer protection, false advertising, and unfair competition law.⁷⁶

The example of Free File data and confidentiality violations raises a more general question about tax compliance robots. Should avenues for challenging such robots' decisions other than government enforcement be available? The example illustrates a situation where the market produces legal violations, presenting law with the problem of how to respond. Especially in a highly regulated area, where compliance robots are expected to follow intricate regulations, it may

government would become a publicly funded direct competitor of the U.S. tax services industry and of Intuit. Government funded services that curtail or eliminate the role of taxpayers in preparing their own taxes could potentially have material and adverse revenue implications.”).

⁷⁴ See, e.g., Ventry, *supra* note 16, at 319; see also Dennis J. Ventry, Jr., Free File: A Story of Agency Capture 4, 9 (April 23, 2019) (working paper, on file with the author)

⁷⁵ See Dennis J. Ventry, Jr., *Whistleblowers and Qui Tam for Tax*, 61 TAX LAW. 357, 359 (2008); Dennis J. Ventry, Jr., *Not Just Whistling Dixie: The Case for Tax Whistleblowers in the States*, 59 VILL. L. REV. 425, 491-94 (2014); Franziska Hertel, *Qui Tam for Tax?: Lessons from the States*, 113 COLUM. L. REV. 1897, 1898 (2014).

⁷⁶ See sources cited *supra* notes 23-24.

seem most natural or comfortable to ask a government agency to increase its control or enforcement of the roots.

But the responsible government agency may fail to accomplish this task. Legal design options that can limit robots' illegal actions do not always require the government to act first. They may also include allowing other legal actions, such as individual and class action lawsuits. When should standing, for instance, be expanded to permit such litigation?

Expanding standing may make sense if the underlying assumption is that the law needs to energetically counteract the market's tendency to break the law. But as the other features of this essay's case study show, compliance robots sometimes break the law but sometimes follow it. If standing is expanded generally to help address a situation where the market encourages robots to break the law, then the resulting broader standing could exacerbate overcompliance and/or produce unnecessary transaction costs in situations where the market encourages robots to follow the law.

c) Addressing User Fraud

In the case of user fraud, tax compliance robots tend to sidestep the legal issue. They do not explicitly encourage user fraud, but features like a constantly-adjusting "tax due" figure may increase the likelihood that users will lie.⁷⁷ If neither the market nor the law penalizes robots for user lies, they have little incentive to discourage fraud.

Addressing user fraud presents a different set of issues compared to Free File violations, in part because the avenue to impact litigation is narrower. What plaintiff would sue TurboTax on the theory that TurboTax let the plaintiff lie, thus reducing the plaintiff's taxes? The persons harmed by user fraud are other taxpayers.⁷⁸ They stand outside

⁷⁷ See sources cited *supra* notes 30-32.

⁷⁸ Cf. Linda Sugin, *Invisible Taxpayers*, 69 TAX L.REV. 617, 630-33 (2016).

the contractual relationship and traditionally lack standing to claim that someone else's taxes are too low.⁷⁹

In other words, the legal design question in the case of user fraud is different than in the case of Free File data and confidentiality obligations. To consider this further, recall the three participants in the drama of tax compliance – the government, the tax compliance robot, and the taxpayer/user. These three participants are aligned differently in the case of user fraud. In contrast to the situation for taxpayer data violations, both of the players in the market – the tax compliance robot and the user – have similar interests. Fraud helps the user to reduce taxes due, and the tax compliance robot's subtle complicity in the effort presumably makes it more popular with its users.

In other words, the user and the robots have aligned incentives when it comes to user fraud. A taxpayer/user is unlikely to challenge a tax compliance robot's omission of fraud detection measures in the robot's programming. Instead, the task of incentivizing tax compliance robots' to encourage taxpayer honesty falls to the government. The analysis here confirms the importance of others' recommendations to increase tax compliance robots' responsibility for user honesty. These include ideas such as requiring user attestations of truth, facilitating pre-filled returns and tailoring factual prompts.⁸⁰

Another point this case study highlights is that requiring robots to take more responsibility for user honesty also raises the question of remedies. Should a robot face penalties if the robot's users persist in lying? Questions include the appropriate standard of care,⁸¹ and how to translate a legal standard of care to the robotic environment.⁸²

⁷⁹ See, e.g., *Flast v. Cohen*, 392 U.S. 83, 99-103 (1968); see also Sugin, *supra* note 78, at 633.

⁸⁰ See sources cited *supra* note 12.

⁸¹ See, e.g., Mark P. Gergen, *Uncertainty and Tax Enforcement: A Case for Moderate Fault-Based Penalties*, 64 TAX L. REV. 453, 454, 472 (2011) (suggesting that legal uncertainty can cause high penalties to over-deter tax noncompliance for risk-averse taxpayers); Kyle D. Logue, *Optimal Tax Compliance and Penalties When the Law is Uncertain*, 27 VA. TAX REV. 241, 293-96 (2007) (analyzing strict liability and fault-based tax penalty structures).

⁸² If the robot were liable for user lies caused or facilitated by its negligence, then questions about how to show reasonableness in coding and data sets arise. See Coglianese & Lehr, *supra* note 7, at 14-17 (describing automatic decisionmaking processes). If the robot were strictly

d) Substantive Tax Law Compliance

With respect to substantive tax law compliance, it appears that tax compliance robots generally incorporate government regulations and guidance into their coding. When they make substantive legal mistakes, some evidence suggests that they lean in favor of making mistakes that overreport tax liability, so that taxpayers pay too much in tax, rather than too little.⁸³

Recall that this compliance with substantive tax law occurs despite the absence of any government regulation that explicitly requires tax compliance robots to follow the law or penalizes them if they get tax law wrong.⁸⁴ For instance, tax preparer and Circular 230 rules that impose penalties for willful or negligent violations of tax law have not been applied to tax compliance robots. Still, such robots adopt a risk-averse view of the law.

The three participants in the drama of tax compliance – government, tax compliance robots, and taxpayer-users -- take yet another alignment when it comes to substantive tax compliance. Here, the tax compliance robot and the government may be aligned in the service of following a safe, government-leaning, risk-averse view of the tax law. The user is sometimes aligned with the robot and the government, since many taxpayers would prefer a return that carries no audit risk. Perhaps sometimes, though, the user might prefer a somewhat more aggressive view – one that the software does not offer. A user might

liable for user lies, fewer such question arise. See Susan C. Morse, *Government-to-Robot Enforcement*, 2019 U. ILL. L. REV. 1497, 1513-16 (2019) (exploring strict liability for compliance robots).

⁸³ See *Hearing on Tax Return Preparation Options for Taxpayers Before the Sen. Comm. on Fin.*, *supra* note 54, at 12-19.

⁸⁴ See 2018 TAS Rep., *supra* note 53, at 69-70 (detailing lack of oversight except for twice-a-year technical compliance reviews which confirm certain security, privacy and usability features).

prefer to claim the larger casualty loss benefit allowed for a Hurricane Katrina-related loss, for instance.⁸⁵

When it comes to substantive tax law, tax compliance robots may present the opposite problem in comparison to the problem that is presented for Free File data and confidentiality violations. In the Free File violations situation, tax compliance robots undercomply with the law. They give government (and taxpayers) less confidentiality and less data protection than the law requires. But in the case of substantive tax law, tax compliance robots overcomply. They give the government more tax revenue than the law requires. Higher tax revenue results when, for instance, a taxpayer is not given the software prompts that would allow the taxpayer to claim the larger tax benefit available as a result of hurricane damage.

The idea that government should penalize robots if they cause taxpayers to underreport taxes due thus makes less sense for issues of substantive tax law compliance. What if market factors alone, without any significant help from legal liability, already cause tax compliance robots to adopt government-favorable, audit-risk-averse views of the tax law? What if tax compliance robots and the government already cooperate in the drafting and implementation of tax regulations and other guidance? The existing situation might present a problem of ‘reverse capture,’ in which a market participant leans in favor of the government.

This case study suggests that tax compliance robots, for market reasons of their own, sometimes pursue a conservative, risk-averse view of the tax law. Perhaps users, for collective action and/or other reasons, are unable to insist on more taxpayer-friendly legal interpretations. Perhaps the law sometimes may face the problem of a robot that complies too much, for instance by causing taxpayers to pay too much in tax. If this is so, then the law may face the counterintuitive

⁸⁵ See *supra* note 54 (explaining National Taxpayer Advocate findings regarding tax preparation software’s calculation of expanded casualty loss benefits relating to Hurricane Katrina).

task of encouraging a robot to produce returns that report less tax liability – not more.

V. Conclusion

Tax compliance robots occupy a central place in the tax system. Their legal decisions can materially influence the implementation of law. This Essay's examination of algorithmic tax compliance robots, such as TurboTax, reveals a diversity in such robots' legal decisions. They appear to break taxpayer data law, and they do not systematically encourage taxpayer honesty. On the other hand, they appear to interpret substantive tax law in a way that minimizes audit risk and sometimes leans away from taxpayer-favorable presentations of law. The market thus presents several compliance and noncompliance variations looking for legal design responses. The choices made about whether and how to control and penalize tax compliance robots will require nuance and variation if they are to fit the diversity of outcomes produced by such robots' operation in their markets.