

# USING THE “SMART RETURN” TO REDUCE TAX EVASION

Joseph Bankman,\* Clifford Nass\*\* & Joel Slemrod\*\*\*

Tax evasion costs federal, state and local governments over 400 billion dollars a year. Compliance efforts have centered on the monetary payoff of evasion. Evasion has been reduced through third-party reporting, which increases the odds of detection (in some cases, to a near-certainty) and audits. Increased penalties have also been used to reduce evasion. At the margin, however, these methods have proven too expensive or politically unpopular to reduce substantially this core residue of evasion.

There has been a growing and impressive literature on the use of social psychology in tax compliance.<sup>1</sup> This explosion of research in social psycholo-

---

\* Ralph M. Parsons Professor of Law and Business, Stanford Law School.

\*\* Late Thomas M. Storke Professor of Communication, Stanford University.

\*\*\* Paul W. McCracken Collegiate Professor of Business Economics and Public Policy and Professor of Economics, University of Michigan.

1. See, e.g., Leandra Lederman, *The Interplay Between Norms and Enforcement in Tax Compliance*, 64 Ohio St. L.J. 145 (2003) (arguing that enforcement and compliance norms operate complementarily); W. Edward Afield, *Dining with Tax Collectors: Reducing the Tax Gap Through Church-Government Partnerships*, 7 Rutgers Bus. L.J. 53 (2010) (proposing partnerships between the government and religious organizations as a way to create a long-term shift in psychological attitudes and cultural norms conducive to tax compliance); Susan Cleary Morse, *Using Salience and Influence to Narrow the Tax Gap*, 40 Loy. U. Chi. L.J. 483 (2009) (discussing possible applications of salience and influence principles to improve tax compliance); Richard Lavoie, *Flying Above the Law and Below the Radar: Instilling a Taxpaying Ethos in Those Playing by Their Own Rules*, 29 Pace L. Rev. 637 (2009) (describing policy recommendations aimed at cultivating a “taxpaying ethos” encompassing the cultural, individual, and institutional factors that shape taxpaying behavior); Marjorie E. Kornhauser, *A Tax Morale Approach to Compliance: Recommendations for the IRS*, 8 Fla. Tax Rev. 599 (2007) (reviewing existing literature on tax morale and recommending several policies to address the tax gap, including establishing a behavioral science unit for research, education, and training); Kathleen Delaney Thomas, *Presumptive Collection: A Prospect Theory Approach to Increasing Small Business Tax Compliance*, 67 Tax L. Rev. 111 (2013) (evaluating presumptive taxation as a tool for reducing tax evasion using prospect theory); Jay A. Soled, *Homage to Information Returns*, 27 Va. Tax Rev. 371 (2007) (arguing that an affirmative requirement to file information returns for taxable gifts received would encourage gift tax compliance because an act of commission is more cognitively dissonant than an act of omission). The existing social psychological research has not, however, focused centrally on the income tax return itself.

gy over the past few decades, along with industry experience with data-driven interactive systems, suggests a different approach to the problem: redesign the tax forms and on-line filing process to elicit more truthful responses from taxpayers. To illustrate the potential of this approach, in this paper we propose three categories of changes that merit testing through pilot studies. The first involves changing the wording on existing returns to increase the psychological cost of evasion and increase the perceived expectation of detection. The second builds appeals to morality in the return itself through the use of a short phrase containing a "self-relevant" noun. The third uses on-line "conversational agents" to ask adaptive questions. Adaptive questions incorporate information known about the taxpayer, including information from previous questions. Adaptive questioning is commonly used in e-commerce because it is more efficient. In the tax context, it would allow the IRS to ask more focused questions, which should reduce evasion and audit costs. It could also benefit taxpayers by reducing filing time and eliminating the risk of subsequent audit. Adaptive questioning that is part of a data-driven system allows for continuous experimentation and real-time modification of algorithms to incorporate the results of that experimentation. A data-driven adaptive questioning system can incorporate and optimize a mix of taxpayer filing experience and revenue need. It can co-exist with the existing tax preparation industry, including commercial e-filing systems such as TurboTax. In the future, as now, the industry can help clients plan for taxes, take advantage of deductions and complete returns.

## I. BACKGROUND

### A. *Evasion*

The IRS's latest estimate (for the 2006 tax year) puts the annual "tax gap"—the difference between taxes owed and paid—at \$450 billion, or 17 percent of tax paid.<sup>2</sup> The relatively high rate of compliance, combined with a relatively low audit rate, has been thought by some to support the notion that we have a "voluntary" tax system: taxpayers do not make a cold-hearted cost-benefit calculation, weighing the monetary benefits of cheating against the likelihood and costs of detection. Instead they pay taxes (in large part) because they

---

2. INTERNAL REVENUE SERV., IR-2012-4, IRS RELEASES NEW TAX GAP ESTIMATES (Jan. 6, 2012), *available at* <http://www.irs.gov/uac/IRS-Releases-New-Tax-Gap-Estimates;-Compliance-Rates-Remain-Statistically-Unchanged-From-Previous-Study> [hereinafter 2012 TAX GAP ESTIMATES]. The \$450 billion is an estimate of the gross tax gap. Later collections and penalties reduce that gap by about 15 percent, to \$385 billion. The IRS estimates of tax gap components, discussed *infra*, do not take into account later collections. In that respect, the estimates are somewhat inflated. On the other hand, the estimates are somewhat deflated because they do not take into account state and local income tax noncompliance. In addition, the tax gap tends to grow (in absolute terms) with the economy, and is probably larger today than in 2006.

think it is the right thing to do. In fact, compliance rates vary widely by income type. The bulk of income—from wages and investments—is subject to third-party reporting. Because taxpayer reports are matched to third-party reports, taxpayers cannot successfully reduce their tax bill by underreporting such income. Not surprisingly, then, the reporting rate for wages, which are subject both to third-party reporting and withholding, is 99 percent.<sup>3</sup>

By contrast, the overall compliance rate from individual business income is estimated at 44 percent, and the tax gap attributable to that category is \$122 billion. The low compliance rate is generally attributed to the lack of third-party reporting and the related fact that these entities often operate in the cash economy.<sup>4</sup> A 1996 IRS study of missing individual business income estimated that the lowest compliance rate was for informal suppliers—moonlighting professionals, child-care workers and other independent contractors. This group reported less than 20 percent of their income, and was responsible for about 30 percent of the tax gap.<sup>5</sup> Extrapolating that percentage to 2006 would produce a tax gap of approximately \$35 billion. In contrast, almost two-thirds of proprietor income was reported. The higher compliance rate has been attributed to the prevalence of credit card purchases, which leave a paper trail that is discoverable upon audit, thus effectively taking proprietors out of the cash economy for the bulk of their revenues. In addition, some proprietors are franchisees who are required by franchisors to keep accurate books.<sup>6</sup> Notwithstanding the fairly high compliance rate, the sheer magnitude of proprietor income means that the absolute losses from underreporting are substantial. The 1996 study estimates the loss from underreporting of proprietor income, if extrapolated to 2006, to be about \$50 billion.

Enforcement studies have not isolated compliance rates for full-time employees of cash businesses. There is some evidence, however, that compliance here is quite low.<sup>7</sup> For most businesses, the employee tax saved by off-the-books payments may be offset by the loss of the employer deduction. But for cash businesses, which report little income, the loss of the deduction may be

---

3. 2012 TAX GAP ESTIMATES, *supra* note 2. The reporting rate for amounts subject to substantial information reporting but no withholding is 92 percent.

4. See U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-12-65IT, TAX GAP: SOURCES OF NONCOMPLIANCE AND STRATEGIES TO REDUCE IT 5 (2012), available at <http://www.gao.gov/assets/600/590215.pdf> ("For example, for types of income for which there is little or no information reporting, such as business income, individual taxpayers tend to misreport over half of their income.").

5. INTERNAL REVENUE SERV., 1415 (REV. 4-96), FEDERAL TAX COMPLIANCE RESEARCH: INDIVIDUAL INCOME TAX GAP ESTIMATES FOR 1985, 1988, AND 1992, available at <http://www.irs.gov/pub/irs-soi/p141596.pdf> (Apr. 1996).

6. Joseph Bankman, *Eight Truths about Collecting Taxes from the Cash Economy*, 117 TAX NOTES 506 (2007).

7. Susan Cleary Morse, Stewart Karlinsky & Joseph Bankman, *Closing the Tax Gap: Cash Businesses and Tax Evasion*, 20 STAN. L. & POL'Y REV. 37, 43-44 (2009).

immaterial. In addition, non-reporting of salary income reduces employment tax liability (FICA, etc.).

Not surprisingly, because income is underreported among informal suppliers and sole proprietors, self-employment tax is also underreported. The compliance rate for this tax has been estimated at 48 percent<sup>8</sup> with an estimated 2006 revenue cost of \$57 billion.<sup>9</sup>

The low compliance rate for hard-to-detect income suggests that the intrinsic desire to, or subjective welfare derived from, obeying the law plays a relatively small role explaining taxpayer behavior. Instead, compliance may be explained quite well by the 1972 Allingham-Sandmo model of evasion.<sup>10</sup> In this model, the taxpayer balances the risk-adjusted gains and potential costs of evasion; the taxpayer's utility function does not include a value for "doing the right thing."

Not all noncompliance is found in the cash sector. We focus solely on the cash sector in this paper for two reasons. First, the cash sector is arguably the largest source of non-compliance. Underreported income of owners and informal suppliers, together with underreported self-employment tax, constitutes 40 percent of the total tax gap as estimated by the IRS. Underreported salary and payroll tax income of employees in this sector adds to that percentage. Second, the problem of cash sector evasion provides a test case for the possible advantages of moving to a "smart return."

We focus on the federal income and employment taxes and tax returns. However, our analysis should apply with equal force to state income taxes. California's tax return, for example, incorporates most figures from the federal tax return. In part relying on the IRS tax gap studies, the California Franchise Tax Board estimates that California experiences an annual tax gap of \$10 billion.<sup>11</sup>

### B. *Harm of Evasion*

Tax evasion raises issues of fairness and efficiency. The efficiency issue arises because the low tax rate in the cash sector attracts employees and capital to that sector. This increases competition in the cash sector, reducing the before-tax rate of return. The opposite effect occurs in the noncash sector: the reduced competition increases before-tax rate of return. If the supply of labor is sufficiently elastic, the movement continues until the tax advantages in the cash

---

8. INTERNAL REVENUE SERV., REDUCING THE FEDERAL TAX GAP 11 (Aug. 2, 2007), available at [http://www.irs.gov/pub/irs-news/tax\\_gap\\_report\\_final\\_080207\\_linked.pdf](http://www.irs.gov/pub/irs-news/tax_gap_report_final_080207_linked.pdf).

9. 2012 TAX GAP ESTIMATE, *supra* note 2.

10. Michael Allingham & Agnar Sandmo, *Income Tax Evasion: A Theoretical Analysis*, 1 J. PUB. ECON. 323 (1972).

11. *See Tax Gap*, STATE OF CAL. FRANCHISE TAX BD., [http://www.ftb.ca.gov/Tax\\_Gap/index.shtml](http://www.ftb.ca.gov/Tax_Gap/index.shtml); *see also* LEGISLATIVE ANALYST'S OFFICE, *California's Tax Gap* (Feb. 2005), [https://www.ftb.ca.gov/Tax\\_Gap/index.shtml](https://www.ftb.ca.gov/Tax_Gap/index.shtml).

sector are offset by a lower rate of return, and vice versa in the noncash sector. The differential rates of before-tax returns in the two sectors are evidence of inefficiency: capital and labor are deployed away from their highest pre-tax, or social, rate of return. In addition, tax that goes uncollected in the cash sector has to be offset from other sources—typically, increased marginal tax rates that will fall on the noncash sector, exacerbating the efficiency costs of a two-sector system. Foregone taxes in the cash sector, if viewed as a tax subsidy, would fall a bit short of the largest tax expenditure (non-taxation of employer-provided health insurance), but would greatly exceed the next largest tax subsidy (the deduction for home mortgage interest).<sup>12</sup> It seems likely that the efficiency costs of undertaxation in the cash sector would be correspondingly large as well.

The differential before-tax rates of return blunt some of the more obvious fairness concerns. In the simple model described above, the marginal business owner who decides to go into the cash sector and underreport income is no better off, after-tax, than he would be if he invested instead in the high-tax non-cash sector. In practice, however, there is heterogeneity among taxpayers. Those taxpayers in the cash sector who remit all the tax owed are disadvantaged in comparison to those who do not, due the market equilibration that reduces their before-tax return. Aggregate behavior determines the outcome of this process, leaving the honest housepainter to earn a below-market after-tax return.

## II. CHANGING WORDING ON EXISTING RETURNS TO INCREASE THE PSYCHOLOGICAL "COST" OF LYING

### A. *Force Taxpayers To Lie By Commission, Rather Than Omission*

The simplest set of reforms would modify existing tax returns to increase the psychological cost of lying, and increase the perceived chances of detection. This can be done simply by asking more direct questions, thereby forcing taxpayers who wish to evade to do so through explicit, clearly false statements, as opposed to giving deceptive answers to more general questions. The difference between these two alternatives can be thought of roughly as the difference between lying through commission and omission.<sup>13</sup>

---

12. The non-taxation of employer-provided health insurance cost an estimated \$90.6 billion in 2006; the deduction for home mortgage interest cost \$69.4 billion. JT. COMM. ON TAXATION, ESTIMATES OF FEDERAL TAX EXPENDITURES FOR FISCAL YEARS 2006-2010 33, 39 (2006), available at <https://www.jct.gov/publications.html?func=startdown&id=1199>.

13. See Jay A. Soled, *Homage to Information Returns*, 27 Va. Tax Rev. 371, 384 (2007) (proposing an affirmative yes-or-no question regarding receipt of taxable gifts and discussing the greater psychological cost of acts of commission relative to acts of omission).

Social scientists have found that lying is cognitively more difficult than truth telling. It requires activation of additional parts of the brain, as well as the sympathetic nervous system (the increased activity of which can be measured by polygraph tests).<sup>14</sup> Numerous studies show that individuals are "cognitive misers," preferring to minimize cognitive activity: this motivates people to tell the truth.<sup>15</sup> Significantly, the more direct the lie, the greater its cognitive load, and psychological cost.

Lying also produces cognitive dissonance—a negative affective state caused by an inconsistency between a current and past activity, statement or belief. Here, cognitive dissonance is produced by the memory or thought (I have \$x income) and the opposite answer written on a return (I don't have \$x income). Cognitive dissonance is also produced by the gap between the belief "I am an honest person" and the knowledge that one has just lied.<sup>16</sup> Cognitive dissonance theory is largely a study of how individuals attempt to rationalize away the contradictions that lead to cognitive dissonance. The more explicit a lie the taxpayer is required to tell to avoid taxes, the harder it is to rationalize away.

Asking a direct question of individuals who are tempted to lie also changes those individuals' perception of the motivation of the questioner. The person asking a direct question is thought to be more interested in the response than a person asking an indirect question. This is true because the direct question shows more thought: because humans are cognitive misers, that additional thought is presumed to be motivated by interest. To understand the intuition here, imagine a person with a sore left ankle hearing two greetings: (1) How are you doing: and (2) how are you doing with that sore left ankle?

In the context of tax deception, the "greater interest" evinced by more direct questions on the tax return is akin to a prospective shoplifter's noticing that she has caught the attention of a policeman on her way into a store. It is likely to increase her estimates of the probability of getting caught (because now the police may be watching the store). It also psychologically primes her to think of detection and penalties as she walks through the store, deciding whether or not to pocket a particular item.

---

14. See, e.g., Vincent van Veen, Marie K. Krug, Jonathan W. Schooler & Cameron S. Carter, *Neural Activity Predicts Attitude Change in Cognitive Dissonance*, 12 NATURE NEUROSCIENCE 1469, 1472-73 (2009) (finding that cognitive dissonance engaged the dorsal anterior cingulate cortex and anterior insula).

15. See, e.g., SUSAN T. FISKE & SHELLEY E. TAYLOR, SOCIAL COGNITION (2d ed. 1991) (coining the term "cognitive miser").

16. Elliot Aronson, *The Return of the Repressed: Dissonance Theory Makes a Come-back*, 3 PSYCHOL. INQUIRY 4, 5 (1992).

B. *Have Taxpayers Swear Under Penalty of Perjury Before Filling Out Return*

As noted above, cognitive load and cognitive dissonance favor truth-telling. It seems likely that priming taxpayers to focus on their legal and moral obligations to tell the truth *before* they fill out a return would strengthen both forces. Lying on a return would contradict a statement immediately made. In contrast, when an individual is asked to attest after she has already filled out a return, cognitive dissonance would lead her to re-characterize her already-filled answers as truthful, perhaps by focusing on the ambiguity in the questions.

In addition, requiring attestation before filing out a return should make honesty more salient at the time of decision-making and by doing so lead taxpayers to be more attentive to their own standards for honest behavior. Under the "Self-Concept Maintenance" theory of Mazar, Amir and Ariely, this increased attention should reduce dishonesty.<sup>17</sup>

Two related studies by Shu, Mazar, Gino, Ariely and Bazerman support the positive compliance impact of requiring attestation of honesty before, rather than after, completing a tax return or other form.<sup>18</sup> In the first study, 101 subjects were given simple math problems, and told they would be paid \$1 for every math problem they correctly solved. Subjects were asked to keep track of their own performance. Unbeknownst to the subjects, their performance was being monitored directly by the experimenters. After completing the problems, subjects were asked to report their earnings on a form that mimicked the "income" portion of the Form 1040. They were also asked to list travel expenses, for which they would be reimbursed. Subjects were divided into three groups: (i) those who were required to sign a statement affirming honesty<sup>19</sup> that was placed at the end of the return; (ii) those who were required to sign the same statement that was placed at the top of the first page of the return; and (iii) those who were not presented with any statement to sign. Fewer cheated in the signature-at-the-top condition (37%) than in the signature-at-the-bottom condition (79%) or no-signature condition (64%). The reduction in cheating for the group required to sign at the top was statistically significant,<sup>20</sup> while the differences between the two other conditions was not.<sup>21</sup> The same relationships held

17. Nina Mazar, On Amir & Dan Ariely, *The Dishonesty of Honest People: A Theory of Self-Concept Maintenance*, 45 J. MKTG. RESEARCH 633 (Dec. 2008).

18. Lisa L. Shu et al., *Signing at the Beginning Makes Ethics Salient and Decreases Dishonest Self-Reports in Comparison to Signing at the End*, PROCEEDINGS NAT'L ACAD. SCI. (Aug. 27, 2012), available at <http://www.pnas.org/content/early/2012/08/22/1209746109.full.pdf>. Commitment statements were also found to increase honesty when placed at the top of an exam. *Id.* at 15197-98.

19. The statement required subjects to declare they had carefully examined the return and that, to the best of their knowledge and belief, it was correct and complete. *Id.* at 15199.

20. Chi squared (2,n=101) = 12.58, p = .0002.

21. p = .017.

for travel expenses. Subjects in the signature-at-the-top group claimed an average of \$5.27 in travel expenses, while subjects in the signature-at-the-bottom group claimed \$9.62 and the no-signature group claimed \$8.45. The differences for the signature-at-the-top and other two groups were statistically significant,<sup>22</sup> while the differences between the signature-at-the-bottom and no-signature groups was not.<sup>23</sup> Because the groups were chosen randomly, there is no reason to suspect that actual travel expenses were on average different.

Interestingly, not only did the attesting to honesty at the top of forms appear to reduce cheating, but attesting at the bottom of forms appeared to have no significant effect, as opposed to not attesting at all. Indeed, in the last mentioned experiment, subjects who signed at the bottom of the form reported more travel expenses than subjects in the no-signature group.

In the second study, the authors worked with an auto insurance company to vary the content of renewal notices sent to a little over 13,000 policyholders for almost 21,000 cars. The renewal notices asked for current odometer mileage; the difference between current and past mileage provides usage data, which is a measure of insurance risk and is incorporated into insurance premiums. The renewal notice did not specifically mention the link between reported odometer mileage and policy cost. However, the authors hypothesized that some policyholders, at least, would know or infer that relationship.

The control group received the renewal form currently in use, which asked policyholders to sign a statement of honesty at the bottom of the form.<sup>24</sup> The treatment group received the identical form, except that the statement of honesty was placed at the top of the form rather than the bottom. Policyholders in the treatment group reported odometer readings that were about 10 percent (2,400 miles) greater than those in the control group—a difference that, under normal insurance company practices, would increase an individual's annual cost of insurance by about \$48.<sup>25</sup> The authors hypothesize that putting the honesty statement at the start of the form leads to objective self-awareness making morality psychologically accessible when it is needed the most. In contrast, putting the same statement at the end of the form means that subjects encounter it for the first time after “[t]he morality train has already left the station.”<sup>26</sup> At that point, individuals may “quickly engage in various mental justifications, reinterpretations and other ‘tricks’ such as suppressing thought about their moral

---

22.  $p < .01$  for the signature-at-the-top v. signature-at-the-bottom group;  $p < .05$  for the signature-at-the-top v. no-signature group.

23.  $p = 0.39$ .

24. Policyholders were required to sign a statement that “I promise that the information I am providing is true.” *Id.* at 15200.

25. Those in the treatment group reported an average of 26,098 miles while those in the control group reported an average of 23,670 miles ( $p < .001$ ).

26. *Id.* at 2.



standards that allow them to maintain a positive self-image<sup>27</sup> without actually correcting their misstatement.

In many colleges, students are asked to sign commitment statements prior to taking exams. Typically, these statements are part of a school's honor code. There is substantial evidence that honor codes reduce cheating, at least when supported or consistent with other aspects of college administration.<sup>28</sup> One experimental study found that signing a commitment statement reduced cheating among MIT and Yale students.<sup>29</sup> However, a recent study found the adoption of a commitment statement prior to taking an exam had no effect on cheating of German undergraduates in a business and finance course.<sup>30</sup> The authors of the latter study speculated that commitment effects differ among populations and may depend on the moral charge of the commitment statement.

### C. Ask Taxpayers More Detailed Questions about Source of Income

Placing the attestation of honesty at the top of the form rather than at the bottom is self-explanatory. (As noted below, e-filing makes it easier to verify that the taxpayers have in fact read and signed that statement first.<sup>31</sup>)

In contrast, forcing taxpayers who wish to evade to lie more explicitly on the return requires replacing broad questions with more detailed questions. Instead of simply omitting a relevant piece of information, a taxpayer will have to explicitly lie about that piece of information. That will sharpen the cognitive load and dissonance associated with the false answer. An example here may prove useful. As noted above, informal suppliers in the cash economy on average report only a small fraction of income and may be responsible for as much as \$30 billion of the income tax gap. This same group appears to comprise a

27. *Id.* at 1.

28. Donald L. McCabe, Linda Klebe Trevino & Kenneth D. Butterfield, *Honor Codes and Other Contextual Influences on Academic Integrity: A Replication and Extension to Modified Honor Code Settings*, 43 RESEARCH HIGHER EDUC. 357, 368 (2002).

29. Nina Mazer, On Amir & Dan Ariely, *The Dishonesty of Honest People: A Theory of Self-Concept Maintenance*, 45 J. MKTG. RESEARCH 633, 636-37 (2008).

30. Tobias Cagala, Ulrich Glogowsky & Johannes Rincke, *Does Commitment to Rules Increase Compliance? Combined Laboratory and Field-Experimental Evidence* 13 (Aug. 6, 2014) (unpublished manuscript), available at [http://www.wirtschaftspolitik.rw.uni-erlangen.de/1-eigene/dateien\\_rincke/CAGALA\\_GLOGOWSKY\\_RINCKE\\_Commitment\\_2014\\_08\\_06.pdf](http://www.wirtschaftspolitik.rw.uni-erlangen.de/1-eigene/dateien_rincke/CAGALA_GLOGOWSKY_RINCKE_Commitment_2014_08_06.pdf).

31. The present statement attests to reviewing the completed form while the top-of-form statement would be phrased in future tense (similar to the statements made in court before testimony). The present statement reads "Under penalties of perjury, I declare that I have examined this return and accompanying schedules and statements, and to the best of my knowledge and belief they are true, correct and complete." The future statement might read "Under penalty of perjury, I declare to the best of my knowledge and belief, everything I write on this form will be true, correct and complete."

10

[Vol. XX:nnn]

significant portion of the \$59 billion gap in self-employment tax. Employees (rather than independent contractors) who underreport moonlighting income comprise another significant source of lost revenue.

Currently a full-time employee with moonlighting income confronts the following relevant section of a Form 1040:

7	Wages, salaries, tips, etc. Attach Forms(s) W-2	_____
8a	Taxable interest	_____
b	Tax-exempt interest. Do not include on line 8a	_____
9a	Ordinary dividends	_____
b	Qualified dividends	_____
10	Taxable refunds, credits, or offsets against state and local income taxes	_____
11	Alimony received	_____
12	Business income or (loss). Attach Schedule C or C-EZ	_____
13	Capital Gain or (loss)	_____
14	Other gains or (losses). Attach Form 4797	_____
15a	IRA distributions	15a _____ b. Taxable amount _____
16a	Pensions and annuities	16a _____ b. Taxable amount _____
17	Rental real estate, royalties, S corporations, trusts etc. Attach Schedule E.	_____
18	Farm income or (loss). Attach Schedule F.	_____
19	Unemployment compensation	_____
20	a. Social Security benefits	20a _____ b. Taxable amount _____
21	Other income. List type and amount	_____
22	Combine the amounts in the far right column for lines 7 through 21	_____

Consider first a taxpayer who is a full-time employee and who is paid in cash for moonlighting at another business. She is required to include both her W-2 income and her moonlighting income on Line 7. She is overwhelmingly likely to report her W-2 income on Line 7 and much less likely to add to that figure her other employment income. She might tell herself one or more of the following: 1) I have attached my W-2 as required; 2) I have attached my W-2 as required, and my W-2 itself states it covers "salaries, tips, etc." which is exactly what Line 7 asks for—that must be enough; 3) I have attached my W-2 and that income constitutes my wages or salary. The other income is just piece-meal payment for some work; 4) the government asks for W-2 income and doesn't specifically ask for other sources of income; 5) if I added my other income to Line 7 it would no longer match the W-2 I am attaching; 6) I am not sure how much other income I made—if the government wants me to keep track of other payments they would have been more explicit.

It may be objected that all of the above statements are merely rationalizations. But rationalizations are important components of lying, because they help reduce cognitive dissonance.

Suppose the same full-time employee works as a painter on weekends for a few friends who do contract work. She probably now qualifies as an independent contractor. Income as an independent contractor should not be listed on Line 7 as wages. Instead, gross income and expenses from that work are properly listed as "Profit or Loss from Business" on Schedule C, with net income from Schedule C listed as business income on Line 12.<sup>32</sup> However, the taxpayer with cash income from painting is unlikely to list that income on either Line 7 as wages or file a Schedule C and list that income as business income on Line 12. In deciding not to file a Schedule C, she might tell herself that she doesn't have a "business." She might reason that 1) businesses are formal entities that have physical locations, signage, and/or employees; 2) I don't consider myself in "business" or owning a "business"; 3) the line for "business income" is grouped together with other items that don't concern me, such as qualified dividends or IRA distributions; and 4) reporting this sort of income requires completing a form that I have never seen and wasn't sent to me.

Of course, the above may constitute "mere" rationalizations or justifications for behavior the taxpayer knows is wrong. Again, however, it is these sorts of rationalizations that reduce cognitive dissonance and thus make lying more palatable.

Imagine, now a revised form with the following questions:

- 7 Wages and salaries reported on W-2. Attach Form(s) here.
- 8 Additional payments from employers
- a. Did you receive cash or other compensation for part or full-time work from employers who did not provide you with a W-2? **You must answer "yes" or "no."** \_\_\_\_\_
- If your answer to this question is "yes," complete 8b and 8c. If not, go to line 9. \_\_\_\_\_
- b. Name and address of employer \_\_\_\_\_
- c. Amount of compensation \_\_\_\_\_
- 9 Additional income from full-time or part-time work
- Did you receive cash or other compensation from providing services directly to customers and/or as an independent contractor? **You must answer "yes" or "no."** \_\_\_\_\_
- If you answered yes, you must complete Schedule C or Sched- \_\_\_\_\_

---

32. Listing the income under Schedule C is more desirable to the taxpayer because it allows certain expenses to offset gross income, rather than be listed as itemized deductions, subject to limitations. It is less desirable because the taxpayer will owe self-employment payroll tax on the income.

ule C-EZ.

Now the taxpayer with unreported W-2 income cannot as easily use any of the rationalizations stated above. If she wishes to avoid reporting the compensation she must expend the cognitive energy to lie, and accept the cognitive dissonance that comes with lying.

Note, also, that the fact the government asks a more specific question tells the taxpayer something about the government's knowledge and motivation. It signals that the IRS knows that this sort of income exists and cares enough about it to ask specifically about it. Psychological theory tells us that the taxpayer will feel the government is more interested in her. She will be primed to think about her deception, and the possibility the government will find out about the deception.

There are doubtless other, and perhaps better, ways to rephrase questions on the 1040 and other standard tax forms to elicit more accurate responses. A primary recommendation of this paper is that the IRS institute a regular system of pilot programs to test different question designs and evaluate their impact on taxpayer behavior. Ideally, these pilot studies would randomize the question design variations so as to facilitate the evaluation of their effectiveness.<sup>33</sup>

### III. BUILDING APPEALS TO MORALITY INTO THE RETURN

Many tax scholars have recommended supplementing penalties with appeals to morality.<sup>34</sup> However, there has been no agreement regarding the form or content of those appeals, and relatively little work done in this area. The lack of focus may reflect a lack of expertise. Tax scholars generally have backgrounds in law, accounting or economics, while appeals to morality fall more squarely in the domains of psychology, literature, rhetoric or advertising. The most ambitious attempt at tying compliance to ethics was that conducted by a group of economists and the Minnesota Department of Revenue.<sup>35</sup> Shortly before filing season, a treatment group of 40,000 taxpayers received a letter from the Department of Revenue. One leg of the treatment group received a letter

---

33. Although the IRS and other countries' tax authorities have understandably been averse to randomizing changes that affect tax liability, they have been open to randomization of other aspects of the tax system involving enforcement. *See, e.g.*, Saurabh Bhargava & Dayanand Manoli, *Why Are Benefits Left on the Table? Assessing the Role of Information, Complexity, and Stigma on Take-up with an IRS Field Experiment* (2011) (unpublished manuscript), available at <http://econweb.umd.edu/~davis/eventpapers/BhargavaBenefits.pdf>.

34. *See, e.g.*, Eugene Bardach, *Moral Suasion and Taxpayer Compliance*, 11 L. & POL'Y 49, 61 (1989); Susan Cleary Morse, *Using Salience and Influence to Narrow the Tax Gap*, 40 LOY. U. CHI. L.J. 483, 504-07 (2009).

35. Marsha Blumenthal, Charles Christian & Joel Slemrod, *Do Normative Appeals Affect Tax Compliance? Evidence from a Controlled Experiment in Minnesota*, 54 NAT'L TAX J. 125 (2001).

describing how tax dollars supported state services, concluding that when taxpayers evade, "the entire community suffers." Another leg of the treatment group received a letter stating that most taxpayers pay their fair share, but a small number of taxpayers deliberately cheat. This second letter was aimed at convincing taxpayers to identify with the "compliant majority." A control group received no letter. Neither treatment letter produced a statistically significant increase in revenue.<sup>36</sup>

Recent work in social psychology suggests a different approach to moral suasion. This work builds on an experimental and theoretical literature in moral psychology,<sup>37</sup> as well as a more established literature on heuristics and attribution theory. Under this approach, individuals change behavior to fit within (or fall without) an identity made relevant at the time of decision-making. Significantly, in the experimental literature, the identity is represented by a single self-relevant noun.

In *When Cheating Would Make You a Cheater: Implicating the Self Prevents Unethical Behavior*, psychologists Bryan, Adams and Monin report on the use of moral appeal in a setting in which cheating goes undetected. In one experiment, ninety-nine subjects recruited off Facebook<sup>38</sup> were asked to flip a coin ten times and to try to make the coin land heads. The ostensible purpose of the experiment was to test out paranormal phenomena. Subjects were paid for each head they reported. To avoid biasing the results by a desire to please the experimenters, the wording of the experiment made clear the experimenters were skeptical of those phenomena. The experiment was conducted on-line under conditions that made it impossible to monitor individual results. Subjects could therefore maximize income by reporting a majority of (or all) heads on their flips.

The treatment group in each experiment was asked "Please don't be a cheater." The control group was divided into two conditions; in one, subjects

---

36. *Id.* at 132. See also Gerlinde Fellner, Rupert Sausgruber, & Christian Traxler, *Testing Enforcement Strategies in the Field: Threat, Moral Appeal and Social Information*, 11 J. EUR. ECON. ASS'N 634 (2013), who test in a field experiment the effect on compliance with Austrian television and radio licensing fees of treatment mailings that include a moral appeal equating compliance with fairness and one providing social information about the overall high level of compliance. Neither of these treatments induced additional compliance.

37. Christopher J. Bryan, Gabrielle S. Adams & Benoît Monin, *When Cheating Would Make You a Cheater: Implicating the Self Prevents Unethical Behavior*, 142 J. EXPERIMENTAL PSYCHOL.: GEN. 1001 (2013); Christopher J. Bryan et al., *Motivating Voter Turnout by Invoking the Self*, 108 PROC. NAT'L ACAD. SCI. 12653 (2011); Susan A. Gelman, Michelle Hollander, Jon Star & Gail D. Heyman, *The Role of Language in the Construction of Kinds*, 39 PSYCHOL. LEARNING & MOTIVATION 201 (2000); Benoît Monin & Alexander H. Jordan, *The Dynamic Moral Self: A Social Psychological Perspective*, in PERSONALITY, IDENTITY, AND CHARACTER: EXPLORATIONS IN MORAL PSYCHOLOGY 341 (Darcia Narvaez & Daniel K. Lapsley eds., 2009).

38. Participants were solicited through an advertisement for a "Stanford web study." 154 subjects volunteered, 131 met criteria as native English speakers and 99 met completion time criterion for good faith participation. Mean age was 22.94 years.

were asked "Please don't cheat"; in the other, subjects were given no instructions that mentioned cheating.

The number of heads claimed in each control group condition was significantly more than could be accounted for by chance ( $p < .0005$  for each condition). The number of heads claimed in the control group asked not to cheat did not differ significantly from that claimed in the control group with no such instruction. The "do not cheat" appeal had no statistically significant effect.

In sharp contrast, the treatment group (which was instructed "Please don't be a cheater") reported results that were not significantly different from that expected by chance ( $p > .80$ ), indicating that cheating was not prevalent. The treatment group results were significantly different from that obtained by the control group under the "don't cheat" condition ( $p = .013$ ) and the no-instruction condition ( $p = .004$ ).

The authors reported two other similar experiments, with similar results.<sup>39</sup> In each case, appeals to a self-relevant noun (cheater) changed behavior, while appeals to a certain kind of behavior (don't cheat) did not. All results were consistent with the authors' hypotheses. The authors interpret the results as demonstrating the importance of the self in moral decision-making, concluding that "manipulating the availability of internal (or personal) attributions for people's own actions - before they even happen - can affect their behavior."

---

39. One experiment was identical to the one described but the subjects in the control condition all received the instruction "Please Don't Cheat".- There was no baseline control in which cheating was not mentioned. There were seventy-nine subjects in that experiment, solicited through a Stanford university administered participant pool. Sixty-two were female; the mean age was 39.87. Subjects in the "cheating" condition claimed more heads (Mean = 5.49) than did those in the "cheater" condition (Mean = 4.88); the difference was statistically significant ( $p = .043$ ).

In another experiment, subjects were approached on Stanford campus by a student experimenter who was unaware of the experimental hypothesis. Fifty-one subjects agreed to participate; exclusion of a non-native English speaker left a final sample of fifty. Subjects in the control condition were instructed "We're interested in how common cheating is on college campuses. We're going to play a game in which we will be able to determine the approximate rate of cheating in the group as a whole but it will be impossible for us to know whether you're cheating." Subjects in the treatment condition received the same instruction, but phrased in terms of the noun cheater(s). Subjects were asked to think of a number between 1 and 10 and, after they reported having thought of the number, were told they would receive \$5 if it was even. They were then asked to reveal the number and were paid as promised. Only a small proportion of the "cheater" group (20.8%) reported thinking of an even number. This result was consistent with bias toward odd numbers documented in the literature. The portion of subjects in the "cheater" group who reported thinking of an even number was more than twice as great, at 50%. The difference was statistically significant ( $p = .032$ ).

The Bryan, Adams and Monin experiments, together with other work in the area,<sup>40</sup> suggest a differing approach to moral argument from that tested in the Minnesota tax experiment described above (or the tax literature more generally). The moral appeal should be built into the return itself so as to be salient at the time of decision-making. It could be short and consist largely of a single self-relevant noun. The appropriate choice of noun, however, is uncertain. Terms such as "cheater" or "liar" have strong associations and for that reason are likely to be more effective than terms such as "tax evader" or "honest reporter and citizen." However, the use of these terms might be thought to unfairly direct suspicion and criticism of taxpayers struggling to understand their return.

The chosen term could be incorporated in a sentence (e.g., "Please don't be a cheater") and incorporated in the perjury attestation, or be written at the top of each page. The most promising variants of the above terms might be tested in pilot programs with randomized design variations.

#### IV. E-FILING AND PREPARER FILINGS

The draft language above would go on a paper return. But these days only about ten percent of individuals self-prepare and self-file paper returns.<sup>41</sup> Other taxpayers either use e-filing software or use a preparer (who uses e-filing software).

The widespread use of software dramatically increases the ability of the government to offer smart returns. For example, on a paper return, even if the pledge to answer all questions honestly was placed at the top of the form, a taxpayer might nonetheless fill out the form before reading and signing the pledge. In contrast, one could design an e-return to require the taxpayer to sign the pledge before being allowed to begin the process of completing a return. Similarly, a paper return requires a taxpayer to answer "yes" or "no" to a question, requiring lies to be made by commission, rather than omission. But a taxpayer might nonetheless leave the line blank, requiring the government either to waive its own requirement, or accept the delay and expense of follow-up notices to the taxpayer before processing the return. On an e-return, a taxpayer who

---

40. Similar to the Bryan, Adams and Monin study above is the study described in Christopher J. Byran et al., *supra* note 40. In that study, subjects were significantly more likely to vote if exposed to a survey that asked "How significant is it to you to be a voter?" than if exposed to a survey that asked "How significant is it to you to vote." The self-concept maintenance theory of Mazer, Amir, and Ariely, *supra* note 15, also supports building a moral appeal into the return, because at that point it calls attention to the taxpayers self-concept of honesty.

41. I.R.S. OVERSIGHT BOARD, ELECTRONIC FILING 2012 ANNUAL REPORT TO CONGRESS 22 (2012).

does not write "yes" or "no" on a line can be prevented from moving to the next line.

An e-return allows the government to add additional questions without taking up valuable "space" on a paper return, and also allows for hyperlinks to examples and explanations. For example, the changes proposed above ask taxpayers whether they have provided services to customers or acted as independent contractors. A hyperlink can help explain the category of independent contractor.

Preparer-filed e-returns allow the IRS to move even further in the direction of a smart return. Preparers can be required to read instructions or other statements aloud, including language urging the taxpayer to report as a honest citizen, not be a cheater and the like.<sup>42</sup> Preparers can also clarify instructions for taxpayers. This, in turn, enables the government to ask additional questions. For example, it was suggested above that the tax form might ask taxpayers whether they received income from employers who did not give them a W-2. Still better, however, would be a question that asked taxpayers if they had any income from employers that was not reported on a W-2. That question would encompass employers who gave the employees a W-2 but gave employees unreported cash "under the table." There is some evidence that that practice is common.<sup>43</sup> However, drafting a question and instructions on this to include on a paper return is difficult. A sample question might read: "Did you receive any payments from your employer that were not included in a W-2?"

Confronted with that question, some taxpayers might reasonably wonder if the term "payments" includes expense reimbursements. Others might wonder if the question asks them to check on their employer's math. The government could try to guess most common questions and provide a list of examples and FAQs. But the government won't be able to anticipate all questions, and the examples and FAQs that the government provides will slow down most taxpayers, and perhaps confuse taxpayers who otherwise correctly interpreted the question.

The core difficulty is that some information is best provided by conversation - dialogue in which one party can ask questions and the other party can respond to those questions. Paper returns don't allow for that sort of "adaptive" question-and-response format. Preparer returns do. A preparer could ask that question, with a list of easily-learned FAQs at hand if needed. The preparer could add additional information or examples only as needed.

Additional questions such as this would increase preparation time, which is a real cost that must be weighed against increased revenue.<sup>44</sup> Adding these

---

42. See *infra* note 47 and accompanying text for precedent of similar requirement placed upon preparers.

43. See Morse, Karlinsky & Bankman, *supra* note 7, at 49.

44. Although not one for one, because the revenue is a transfer to the government while the preparer time is a real resource cost.



questions would increase taxes remitted by some taxpayers who use preparers and are sensitive, at the margin, to cognitive dissonance, raising, at least for some, questions of horizontal equity.

From the preparer perspective, the additional questions would impose additional time, and perhaps shift some taxpayers from preparers to e-software. Qualitative surveys suggest that, for a variety of reasons, taxpayers in sectors with high rates of evasion prefer to use preparers to file. Because of that, and because of informational constraints in the filing market, it seems unlikely that this shift would be significant.

There is reason to believe that many preparers might regard additional compliance induced by smart returns, including compliance from this additional question, as a plus. Preparers do not appear to elicit a premium for working with taxpayers in sectors with a high rate of tax cheating<sup>45</sup>, and may prefer, as a matter of professional and personal ethics, to work with honest taxpayers. Many preparers find it awkward and unpleasant to push taxpayers even subtly on missing income or erroneous deductions. A set of required questions removes this awkwardness: it is the government, not the preparer, who is asking these uncomfortable follow-up questions.

There is precedent for requiring additional information on professionally-prepared returns. Under Section 6695(g), preparers who file claims for EITC are required to complete the twenty-seven question Form 8867. That form requires preparers to address specific questions that are not part of self-filed or e-filed returns.<sup>46</sup> In addition, as part of the due diligence requirements imposed by that form and the accompanying regulations, preparers are required to ask of the taxpayer further questions when answers seem incorrect, inconsistent or incomplete.<sup>47</sup>

## V. USE OF DATA-DRIVEN INTERACTIVE SYSTEMS TO ASK INDIVIDUALIZED QUESTIONS

### A. Generally

Current reporting forms and requirements group taxpayers into a number of discrete segments. Some taxpayers are required to file only a Form 1040EZ, others a 1040 with Schedule A, and so on. There is no distinction among taxpayers within a group. Once categorized, each member receives the identical form with the identical questions.

---

45. See Bankman, Karlinsky and Morse, *supra* note 6.

46. For example, question twenty-one asks "If any qualifying child is not the taxpayer's son or daughter, did you ask why the parents were not claiming the child and documenting the answer?"

47. Treas. Reg. § 1.6695-2(b)(3) (2000).

In contrast, industry uses data-driven systems to optimize interactions with customers and other users. These systems make use of existing information known about a consumer to customize interactions with the consumer, and update that information in real time. For example, Amazon uses a data-driven interactive system to offer individualized product recommendations to consumers. Google does as well, using past searches to optimize current searches, updating information instantly.

Use of “conversational agents” tethered to data-driven systems could be used in e-filing software, including software used by preparers. In the running example discussed above, preparers asked taxpayers whether they had received “under-the-table” payments from their employers that were not included on their W-2. A data-driven interactive system would omit that question for taxpayers who worked for large employers, non-profits or government, and might limit the question to taxpayers with employers likely to be in the cash sector. It might omit the question entirely if the “take” dropped below a certain minimum, or below the “take” from a differently formulated question. A key advantage to this approach is that by eliminating irrelevant questions, the taxpayer will feel that the questions that are being asked are more important: that importance should make it harder for the taxpayer to lie. At a more general level, not asking irrelevant questions follows the maxim of relevance proposed by the semanticist Paul Grice, whose work has been incorporated into fields of sociology, psychology and human-computer interface.<sup>48</sup> Another relevant Griceian maxim is the principle of quantity: taxpayers should not be given too little or too much information. By having hyperlinks that provide hierarchically structured information, with each level providing more information than the one before, taxpayers are likely to receive only the information they need.

Some taxpayers might not be asked the more basic question of whether they had received any additional service income from any sources. Other taxpayers might be asked the question in greater detail, or asked to initial their responses, or asked to explicitly type or click on “no.”

At some point, a conversational agent begins to take on the role of auditor. An auditor does not ask the same questions of each taxpayer but instead asks those questions she believes will uncover information relevant to noncompliance; she updates her priors as new information is revealed and uses that information to inform her next question. A human auditor has certain advantages over the agent: experience with taxpayer behavior and human nature as well as an ability to read expressions. On the other hand, an interactive data-driven system has one great advantage over the auditor: it has total recall of every question asked of the taxpayer (and potentially of all other taxpayers historically) and every response to the question, and can optimally use this information to

---

48. H. Paul Grice, *Logic and Conversation*, in 3 SYNTAX AND SEMANTICS 41-48 (Peter Cole & Jerry L. Morgan eds., 1975)

formulate its responses to the taxpayer. In addition, its marginal cost, once developed, is close to zero.

It may be objected that while the conversational agent increases compliance, it creates a dysphoric experience for taxpayers. There is something Orwellian about being asked intrusive questions by a computer.<sup>49</sup> Filing represents a significant interaction between a citizen and her government and reducing the quality of that (already unpleasant) experience represents a social cost that must be balanced against compliance gains.

On the other hand, the conversational agent has the potential to increase taxpayer satisfaction with the filing process. Because the agent asks more targeted and personalized questions than the fixed form, it may be possible to accomplish the same compliance level with fewer questions. It might also be possible to use the presence of conversational agents to reduce the number and expense of audits. Certainly, the agent could leverage principles of conversation to make the interaction more comfortable. For example, the form could encourage the taxpayer with comments like, "Thank you: that was helpful information," or "you are almost done with this form." Existing proprietary tax software has this feature. Finally, it would be possible to survey some percentage of users such that taxpayer satisfaction could be an outcome measure used to guide form design and modification.

#### B. Use of Data-Driven Interactive Systems with Data Retrieval or Pro-

---

49. See Joel Slemrod, *Old George Orwell Got It Backward: Some Thoughts on Behavioral Tax Economics*, 66 PUB. FIN. ANALYSIS 15 (2010). What we know about how people react to computers might be usefully compared to what we know about how humans react to other people, which may in turn be different from how they react to government authority figures and the computers that implement a government tax system. Behavioral game theory and laboratory experiments suggest that beliefs about what motivated another person and judging the appropriateness of the motives, their "intentionality," is critical to explaining behavior toward that person. See Sally Blount, *When Social Outcomes Aren't Fair: The Effect of Causal Attributions on Preferences*, 63 ORG. BEHAV. & HUM. DECISION PROCESSES 131 (1995). Many people are willing to reciprocate what they perceive to be kindness in other individuals, and to not reciprocate – or even punish – perceived meanness in others. Some evidence suggests that people care about whether others are unfair to them, but do not care much about how they treat others, an important distinction for understanding individuals' attitudes toward government because tax policies do not generally single out particular individuals although they may single out groups of people defined by income, geography, demographics, tastes, or choices.

What we know little about is to what extent the psychological dynamics of individuals' relations with other individuals may be different than the psychological dynamics of individuals versus an agency of the government. How do individuals ascribe human qualities like kindness or meanness to a government? For example, do such feelings change with a change of government? While we know something about how people react to computers, we do not know much about whether their reactions would be different if the computer was asking questions about their financial affairs and tax obligations. This is why pilot studies would be especially helpful.

*Forma Returns*

In recent years, a number of scholars have proposed simplifying filing through what has been called a data retrieval system. Under such a system, the government would give taxpayers timely access to third-party and other data already in the government's possession.<sup>50</sup> The data would be downloadable into the correct columns on e-forms. The taxpayers or their preparers could review the forms, add other data, and then file the forms. For virtually all non-business taxpayers, the only additional data needed for filing would be charitable contributions.<sup>51</sup> Recordkeeping is the single largest component of individual filing costs, and reduction or elimination of that requirement would substantially reduce those costs.<sup>52</sup>

For taxpayers with simple returns, the only pieces of data to be retrieved are W-2 data and (in some cases) interest income. If the government provided that data in downloadable form on an e-return, the taxpayer would simply need to enter her household status and hit 'calculate' to determine her tax liability. In what has been called a "pro-forma return", the taxpayer is saved the ambiguity of that last step. Instead, the government uses that data, together with last year's filing status information, to provide a tentative return for the taxpayer to review, change and file. The California ReadyReturn, which is available to over a million state residents, is an example of a pro-forma return.<sup>53</sup> Pro-forma returns are used in Finland, Sweden, and a number of other countries.

This approach would also give the taxpayer the sense that the computer (and by extension, the government) "cares" about the taxpayer in that it went to the trouble of filling in the data for the taxpayer. While this is obviously not an "effort" for the computer, a number of studies have shown that people respond positively to computers that seem to exert effort on their behalf.<sup>54</sup>

It was noted above that data-driven interactive systems allow the tax authority to interact with the taxpayer at point of filing, and in that manner blur the distinction between filing and audit. The combination of data-driven interactive systems and data retrieval increases the possibility of combining filing and audit functions. In some cases, it might allow the tax authority to complete an audit at point of filing. The conversational agent could verify data and ask questions at point of filing. The tax authority could then use its analytic tech-

---

50. See, e.g., Joseph Bankman, *Using Technology to Simplify Filing*, 61 NAT'L TAX J. 773, 774 (2008).

51. *Id.* at 775.

52. See Joel Slemrod & Nikki Sorum, *The Compliance Cost of the U.S. Individual Income Tax System*, 37 NAT'L TAX J. 461, 466 (1985) ("Nearly two-thirds of the time spent on filing was devoted to recordkeeping, with actual preparation of the return accounting for about one-fifth, and research about one-tenth of total time.").

53. For more on ReadyReturn, see Joseph Bankman, *Simple Filing for Average Citizens: The California ReadyReturn*, 107 TAX NOTES 1431 (2005).

54. CLIFFORD NASS & CORINA YEN, *THE MAN WHO LIED TO HIS LAPTOP* (2012).

niques to see whether a more thorough audit is required. If, as would almost always be the case, the answer is "no," the taxpayer would be informed that her return was accepted as filed and would not be subject to any other further audit. (This assurance could be cabined to exclude adjustments due to late-arriving third-party data.) The taxpayer could be praised by the system for filling out the return carefully and accurately: people are very positively disposed to computers that praise them.<sup>55</sup>

There is reason to believe that collapsing the filing and audit period would be valuable to the government, as well as to the taxpayer. Most taxpayers claim refunds on individual returns. Currently, those refund claims are paid out before any audits are conducted. If an audit later reveals deficiencies, the state has to dun the taxpayer to get back amounts it has already paid out. The state incurs costs in doing so, and never collects all that it is owed. California found that accelerating its own data retrieval capabilities significantly reduced its collection costs. In 2012, the IRS announced its intention to move away from the traditional "look-back" system of compliance and move towards a "real-time" tax system of document matching.<sup>56</sup> The agency characterized that move as a way to both increase compliance and reduce tax burden.<sup>57</sup> An interactive, data-driven filing system could be used to expand the reach and reduce the downside of a real-time document-matching program. If discrepancies are noticed, the system could frame the inconsistency in terms of a question rather than an accusation, such as "the number you entered here doesn't seem to match our records. Could you please check it again?" or "that is an unusually low number for people with returns like yours: could this be a typo?" This sort of questioning avoids the need to accuse the taxpayer of cheating: people react very negatively to criticism from a computer.<sup>58</sup>

The broad principle here is that an interaction that feels like a conversation that obeys a wide range of social norms is intrinsically more pleasant than a standardized form. For example, if the interaction is framed as a set of questions, the taxpayer should have the ability to ask a question back, for example, "why are you asking this?"

#### VI. SHOULD THE GOVERNMENT BE A "SMART" USER AND COLLECTOR OF INFORMATION?

The proposals described would make the government a smarter user of information and require that the taxpayer verify some forms of information. Potential benefits include reduced evasion, reduced compliance costs and (more

---

55. BYRON REEVES & CLIFFORD NASS, *THE MEDIA EQUATION* (1996).

56. INTERNAL REVENUE SERV., FS-2012-6, IRS RELEASES 2006 TAX GAP ESTIMATES (Jan. 2012), available at <http://www.irs.gov/uac/IRS-Releases-2006-Tax-Gap-Estimates>.

57. *Id.*

58. NASS, *supra* note 57.

speculatively) a better filing experience. As discussed above, this last benefit could be monitored by measuring taxpayer satisfaction, and adjusting the number of questions and other features to ensure an overall improvement of some agreed-upon metric.

For the most part, these benefits accrue when the government uses information it has already received from the taxpayers. However, some of the benefits of the most ambitious form of the proposals require the government to use other information that is easily accessed, such as whether the taxpayer works for a large employer. The proposals thus leave the IRS with more information and greater capacity to make sense of the information it already has. To the extent one distrusts the government to use the information for appropriate purposes, the combination of greater informational facility and more information is (all else equal) a negative.<sup>59</sup>

It may be useful to think of government-acquired information on a continuum, with each point representing some combination of information and resultant costs and benefits. At the left end of the continuum, one might imagine a world in which the government did not require information reporting. Relative to present law, compliance would fall, probably substantially. In addition, the compliance burdens on honest taxpayers might increase, as it is less likely that institutions would collect and distribute that information. (Tax burdens on honest taxpayers would certainly increase). However, the danger of the IRS-held information being used in an unauthorized manner would fall. Present law marks another point on the continuum; to the right of present law is a point that denotes the proposals described above that make smarter use of information the government already has. To the right of that lie proposals described above that make use of additional information.<sup>60</sup>

---

59. For a longer discussion of the more general issue raised here, see Joel Slemrod, *Taxation and Big Brother: Information, Personalization and Privacy in 21st Century Tax Policy*, 27 FISCAL STUDIES 1 (2006)

60. Moving still further in the direction of government-acquired and manipulated data, one might imagine a system in which the government is free to use any data and redesign substantive tax law to take advantage of that data. As one of the authors has suggested, the government could theoretically acquire enough data to move (in part or whole) from an income tax to an ability tax. Income would be relevant as indicia of ability; other indicia of ability might be gleaned from purchases, travel and the like. While an ability tax offers important efficiency advantages, it is unlikely to be attractive to most voters. A central reason for this is that under such a tax, liability is a function of an immutable trait (ability) rather than behavior. A high-ability individual is taxed even if he does not work (and thus must work to pay the tax). A secondary reason, relevant to this discussion, is the enormous amount of information it leaves in the hands of the government. An ability tax is qualitatively different from the proposals discussed in this paper. It does not merely use more data, it uses data in service of a different substantive law.

## VII. CONCLUSION

Past compliance efforts have used audits, penalties and third-party reporting as the primary tools with which to reduce evasion. These tools continue to be important today. This paper outlines two other (related) approaches to the problem. First, the tax form – in its paper, electronic and preparer-completed formats – could be changed to increase the psychological cost of lying, and the perceived risk of detection. Second, the return could contain a short phrase with a self-relevant noun that steers the taxpayer toward moral behavior. The impact of these changes can be tested through pilot programs, and if effective could raise substantial sums of revenues at virtually no cost. More ambitiously, we might adopt a data-driven interactive system for on-line filing. Conversational agents can ask adaptive questions and continually modify those questions to take into account taxpayer response. When tied to data retrieval, this system might combine many audit and filing functions. In the context of this paper, the system is naturally seen as optimizing compliance and minimizing government enforcement costs. However, the system can and should be designed to take into account the taxpayer filing experience and compliance costs.