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## What Makes Taxes Seem Fair?

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What makes people perceive their taxes as “fair”? We worked with the news website Vox to produce a short quiz about tax knowledge, which we used to test whether drawing readers’ attention to certain aspects of the tax code changed their opinions about the fairness of their own taxes. We found that receiving tax information did change reader’s opinions, but those changes were more substantial when participants were encouraged to think about how tax policy affects lower-income people rather than how it affects higher-income people. Several intriguing hypotheses, each worthy of additional research, follow from this demonstration.

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"Do you regard the income tax you will have to pay this year as fair?" Although pollsters have been asking Americans about the fairness of their taxes for more than 70 years,<sup>1</sup> we know surprisingly little about why respondents answer that question the way they do. But it is an important question. If we are to have adequate and reliable resources to pay for public goods, we should know what makes taxpayers willing to pay their share. One important first step is to understand when and why they perceive their taxes as fair.

Working with Vox, we tested whether presenting different kinds of information about the tax code in a quiz changed respondents' opinions about the fairness of their taxes. We learned a few things:

- **Tax facts matter.** Drawing respondents' attention to particular aspects of the tax code significantly shifted their attitudes about who should pay more or less in taxes, and it even changed their perceptions of their taxes' fairness.
- **Facts about taxes on lower-income people matter most.** Thinking about taxes paid by lower-income people had a larger effect on attitudes than thinking about taxes paid by higher-income people.
- **Fairness works like a see-saw.** If respondents thought the amount of taxes paid by individuals at one end of the income spectrum seemed too high, they concluded that the amount paid by people at the other end of the spectrum must be too low. For instance, drawing respondents' attention to high taxes on lower-income people made them especially likely to think higher-income people are not paying enough, and this effect was at least as large as when they were encouraged to think directly about low taxes on higher-income people.
- **Ignorance might be bliss.** Answering any questions about tax policy lowered the respondents' sense of their own taxes' fairness, even when they answered the questions correctly.

## HOW DID THE EXPERIMENT WORK?

Between February 6 and February 13, 2017, over 7,000 Vox readers participated in a tax policy quiz written by the Tax Policy Center. Embedded in the quiz was an experiment: at random, some

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<sup>1</sup> This question has been asked by Gallup since 1943. See "Taxes," In Depth: Topics A to Z, Gallup, accessed March 7, 2017, <http://www.gallup.com/poll/1714/taxes.aspx>.

people were asked different factual questions than others. That variation allowed us to see whether drawing participants' attention to certain aspects of the tax code changed their overall attitudes about tax policy.

Participants received four factual questions about taxes and five opinion questions about taxes. All participants received the same opinion questions, but each saw one of four different sets of factual questions:

- questions intended to encourage respondents to think that people with higher incomes pay relatively low taxes (about loopholes, for instance)
- questions intended to encourage respondents to think that people with higher incomes pay relatively high taxes (about the percentage of income tax revenue that comes from very high earners, for instance)
- questions intended to encourage respondents to think that people with lower incomes pay relatively low taxes (about refundable tax credits, for instance)
- questions intended to encourage respondents to think that people with lower incomes pay relatively high taxes (about grocery taxes, for instance)

We randomized which set of factual questions a participant saw and grouped the multiple-choice answers relatively close to the accurate answer; this gave respondents an opportunity to intuit the approximate reality of the tax policies in question even if they didn't know the exact answer.

All participants answered the same five opinion questions. Respondents were asked

- whether higher-income people pay too little, their fair share, or too much in taxes;
- whether lower-income people pay too little, their fair share, or too much in taxes;
- what the highest tax rate anyone should pay is;
- whether the government should engage in redistribution by levying heavy taxes on higher-income people; and
- whether the respondent saw his or her own taxes as fair.

Most people answered the opinion questions after the factual questions, but a small group answered the opinion questions first. The latter respondents are a control group: they are similar to the rest of the survey respondents, but they did not receive a "treatment" (answering one of the sets of questions). By comparing respondents in the treatment group to the control group, we can estimate how much the questions influenced the attitudes of quiz participants.

Finally, respondents provided their zip code and gender and reported whether they had filed their income taxes yet this year. (Appendix A shows the complete survey instrument.)

## WHO PARTICIPATED?

In total, 7,710 Vox readers participated in the quiz over one week of data collection. Participants resided in all 50 states (plus the District of Columbia and Puerto Rico), but they were concentrated in urban areas.

Quiz participants were not a nationally representative sample. Foremost, their attitudes were more progressive than the public as a whole. For instance, in a nationally representative sample of US adults, 61 percent of respondents think that higher-income people are paying too little in taxes;<sup>2</sup> among quiz respondents, that share was 82 percent.

Given the demographics of the Vox audience,<sup>3</sup> the quiz respondents were likely also younger and wealthier than the average American. And although Vox's readership is about evenly split between men and women, 76 percent of quiz participants were men. We can only speculate about what drew more men to the quiz than women; perhaps the subject matter itself or the framing of the quiz was more appealing to men, or perhaps Vox's most engaged readership is heavily male.

Because the sample of participants differs from Americans generally, we judge the effect of our experiment by comparing quiz participants to one another. We will discuss these differences throughout this brief and examine how the results might change if a broader population took the quiz.

## TAX FACTS MATTER—ESPECIALLY TAX FACTS ABOUT LOWER-INCOME PEOPLE

Having their attention drawn to particular aspects of the tax code substantially altered respondents' attitudes about tax policy. And that effect was especially strong when participants were asked to think about taxes paid by lower-income people.

In the control group (which answered the opinion questions before seeing the factual questions), 56 percent of respondents thought that lower-income people pay too much in taxes.<sup>4</sup>

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<sup>2</sup> "Americans Still Say Upper-Income Pay Too Little in Taxes," last modified April 15, 2016, accessed March 7, 2017, <http://www.gallup.com/poll/190775/americans-say-upper-income-pay-little-taxes.aspx>.

<sup>3</sup> Demographic data on readership made available to our researchers by Vox.

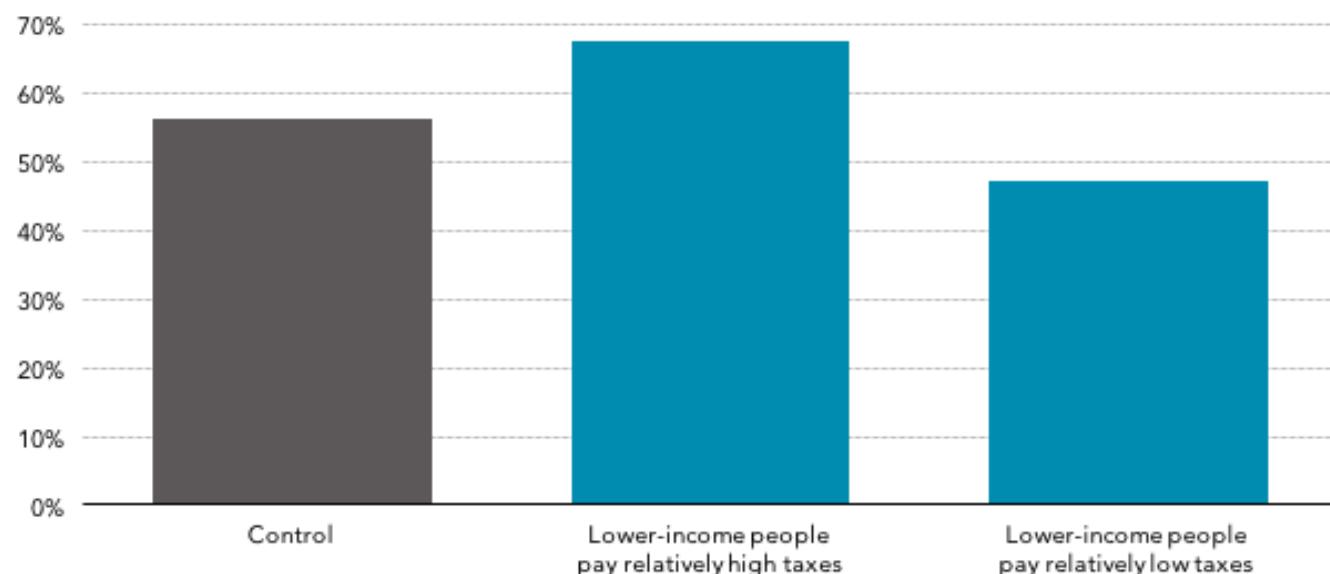
<sup>4</sup> In a nationally representative sample, 46 percent of US adults believe lower-income people pay too much. "Taxes," In Depth: Topics A to Z, Gallup, accessed March 7, 2017, <http://www.gallup.com/poll/1714/taxes.aspx>.

That number rose more than 11 percentage points for people who answered the four factual questions suggesting that taxes fall heavily on those with lower incomes: 68 percent of those respondents thought lower-income people are paying too much in taxes (figure 1). In contrast, among those who answered questions concerning tax breaks for lower-income people, 47 percent thought lower-income people pay too much, a 9 percentage-point decline.

**FIGURE 1**

### Perceptions of Lower-Income Taxpayers

Percentage of respondents saying lower-income people pay too much in taxes, by implication of quiz questions



Source: Author's calculations.

The effects were more muted for the questions about higher-income people. Eighty-two percent of participants in the control group thought that higher-income people pay too little in taxes. Answering questions about loopholes and overseas tax havens did strengthen these views: 86 percent of respondents who answered questions implying that higher-income people pay little tax indeed thought that higher-income people were paying too little, a 4 percentage-point increase. Thus, those questions had a smaller effect than either of the question sets about lower-income people. Moreover, questions implying that higher-income people pay a lot of taxes had no measureable effect. That is, people who saw those questions did not report attitudes significantly different from the control group.

A similar relationship can be seen in participants' attitudes about the fairness of their own taxes (figure 2). Again, thinking about taxes paid by those with lower incomes changed respondents' minds more than thinking about taxes paid by those with higher incomes. Of those in the four treatment groups, the respondents reporting the highest sense of fairness were those who answered questions suggesting lower-income people do not pay a lot in taxes—58 percent of those respondents described their taxes as somewhat or very fair. Those reporting the lowest

sense of tax fairness were those who answered questions emphasizing that lower-income people pay a lot in taxes—only 51 percent of those respondents described their taxes as fair.

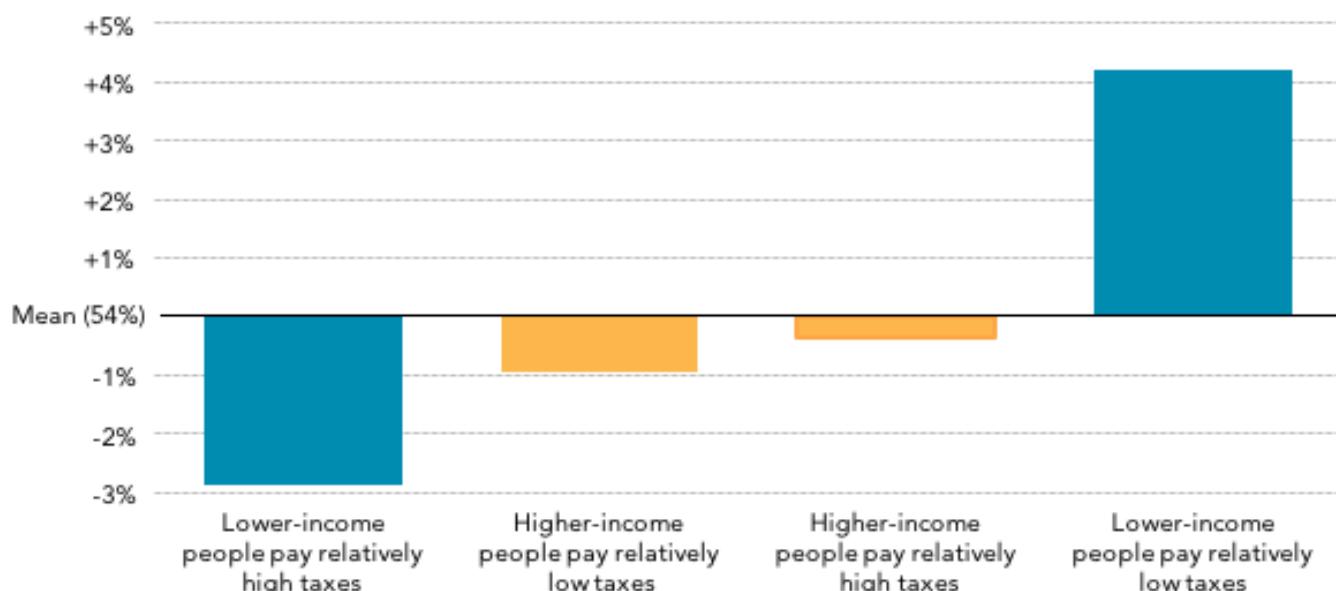
FIGURE 2

### Respondents' Perceptions of Fairness of Their Own Taxes



Difference in percentage of respondents choosing "somewhat"

or "very" fair, by implication of quiz questions



Source: Author's calculations.

These results are consistent with what one might expect from a left-leaning Vox audience. If you think taxes should be progressive, it makes sense that you would feel your taxes are fairer when reminded of the progressive aspects of the tax code that reduce the tax liability of lower-income people, and you would feel your taxes are less fair when reminded of the regressive aspects of the tax code that put a larger financial obligation on lower-income people.

But that ideological slant does not explain why questions about higher-income people did not seem to have much of an effect on respondents' perceptions of tax fairness. If being reminded of progressivity or regressivity were all that mattered, the progressive-minded quiz participants receiving questions reminding them of aspects of the tax code that cost people with higher incomes more money should have felt their taxes to be fairer, and those receiving questions reminding them of how people with higher incomes can avoid tax responsibilities should have felt their taxes to be less fair. But this is not what the data show. Instead, about 53 percent of those receiving either set of questions about higher-income people described their own taxes as somewhat or very fair, with a difference of less than 1 percentage point between the group averages (figure 2).

Why might questions about higher-income people have less of an effect on attitudes than questions about lower-income people? The most obvious explanation, though we cannot confirm it from the data here, is that Vox readers might have more knowledge or more firmly held beliefs about taxes paid by the former and less knowledge or more weakly held beliefs about taxes paid by the latter. For instance, Vox readers might know more about taxes paid by higher-income people because Vox readers have higher incomes than average people or because the media reports regularly about taxes paid (or not paid) by those with higher incomes. If the survey questions did not bring new considerations to the respondents' minds, their answers would look the same as the answers of those in the control group. Further, left-leaning people might have especially strong views on whether higher-income people should pay more in taxes, or they might be more affected by concerns about lower-income people. There are several reasons, therefore, that the survey questions about taxes paid by higher-income people would not have much sway over respondents' attitudes.<sup>5</sup>

## FAIRNESS AS A SEE-SAW: QUESTIONS ABOUT LOW-INCOME PEOPLE CHANGE ATTITUDES ABOUT HIGH-INCOME PEOPLE

Being reminded of taxes paid by lower-income people also changed respondents' perceptions of the taxes paid by higher-income people. When a respondent was encouraged to think that lower-income people pay a lot in taxes, he or she concluded that higher-income people should pay more. Eighty-seven percent of people receiving questions suggesting that lower-income people pay a lot of taxes thought higher-income people were paying too little in taxes, compared with 82 percent in the control group (figure 3). The effect of those questions was at least as large as the effect of the questions that suggested that higher-income people pay little tax; 86 percent of people receiving those questions said taxes on those with higher incomes were too low.<sup>6</sup>

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<sup>5</sup> On the other hand, questions about taxes paid by lower-income people might have been inadvertently written in a more stylistically compelling way. Every effort was made to keep the questions as similar in tone and structure as possible, but that possibility is difficult to entirely rule out.

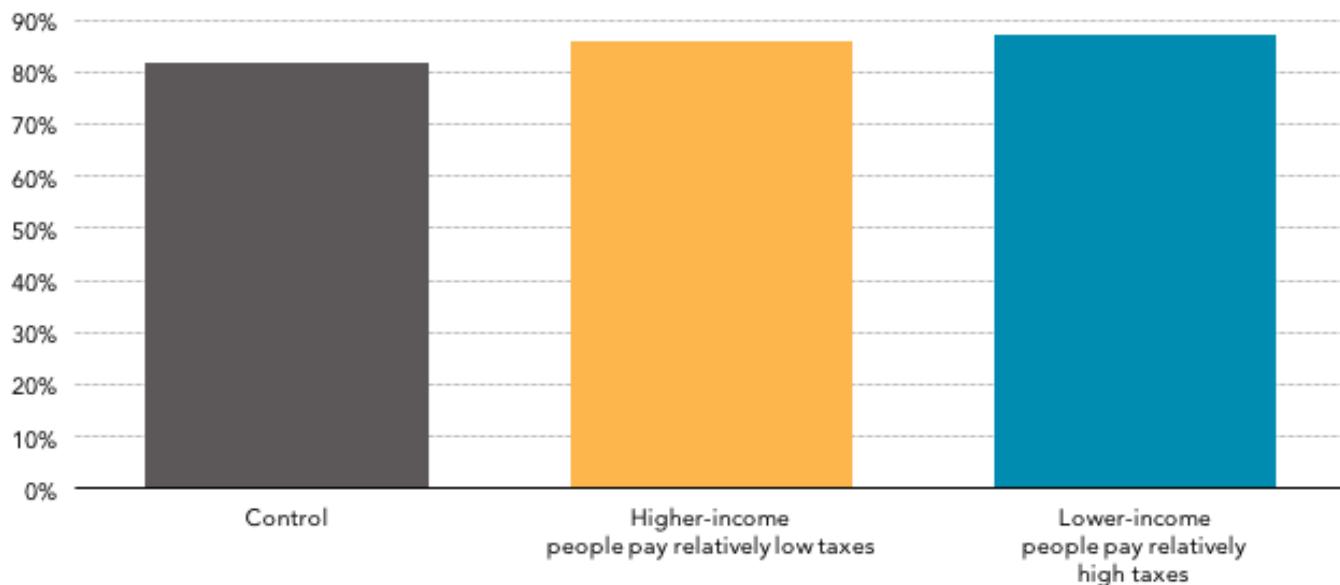
<sup>6</sup> The inverse may also be true. Sixty-two percent of respondents receiving questions implying higher-income people pay little taxes said that lower-income people are paying too much, compared with 59 percent in the control group. Unlike the other results reported here, however, this finding does not quite reach traditional levels of statistical significance ( $p = 0.06$ ).

**FIGURE 3**



### Fairness as a "See-Saw"

Percentage of respondents saying higher-income people pay too little in taxes, by implication of quiz questions



Source: Author's calculations.

To increase the belief that higher-income people need to pay more in taxes, emphasizing the large amount paid by those with lower incomes was as influential as emphasizing the how the tax code benefits those with higher incomes. Thus, the respondents' views of tax fairness are a bit like a see-saw: finding out that one end of the spectrum is high is evidence that the other end is too low.

### BLISSFUL IGNORANCE

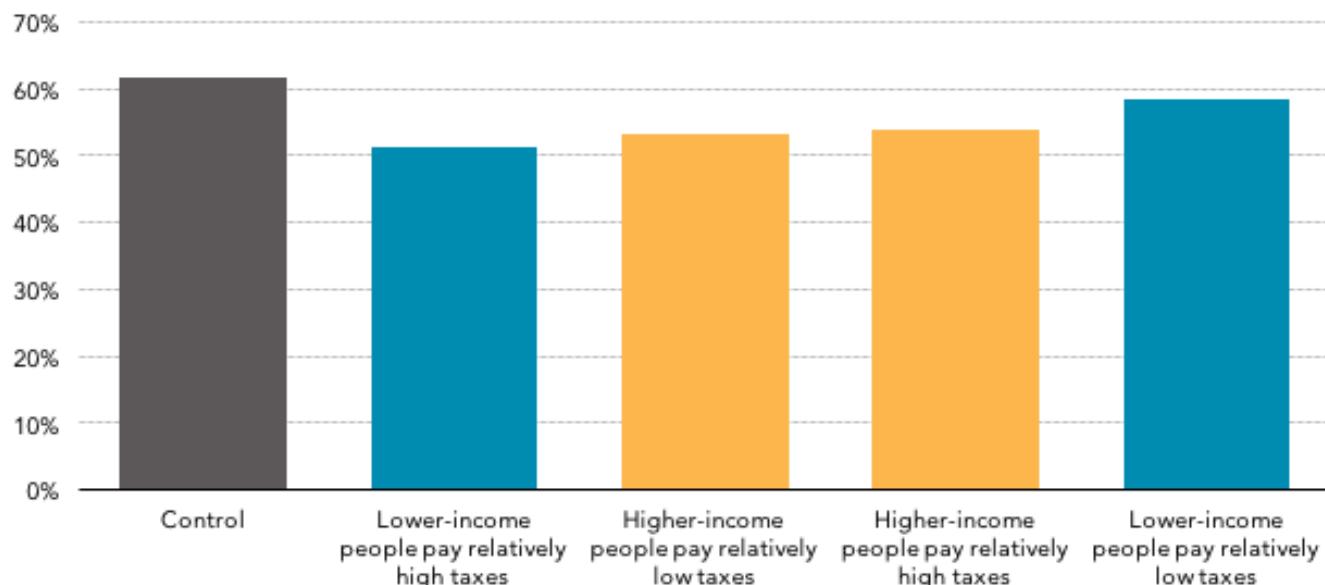
The people who reported the highest sense of fairness about their taxes were in the control group (those who had not yet received any factual questions about the tax code). Sixty-two percent of respondents in the control group thought their taxes were somewhat or very fair compared with an average of 54 percent across other groups (figure 4).

FIGURE 4



## Perceptions of Fairness of Own Taxes: Control versus Treatments

Percentage of respondents choosing "somewhat" or "very" fair,  
by implication of quiz questions



Source: Author's calculations.

Because the quiz was quite difficult, one might think that difference is just an effect of respondents confronting their lack of knowledge about tax policy. But being upset about not knowing the answers to the questions cannot be the only cause: even people who got all four questions right were less likely to describe their taxes as fair than the control group.

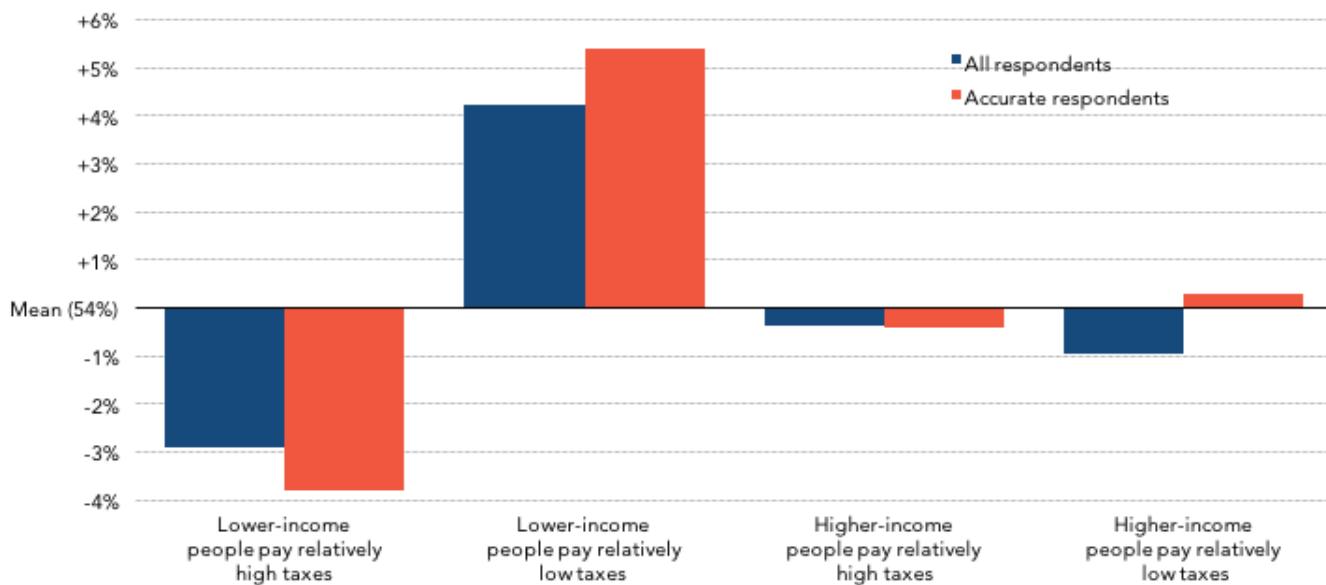
In general, the attitudes of people who responded more accurately did not differ substantially from those of other respondents. People who responded more accurately did not, for instance, support policies that were more progressive or less progressive, on average. The lack of differences by accuracy may be because the quiz was short and difficult; only 37 percent of people in the treatment groups correctly answered more than two of the four questions (figure 5).

**FIGURE 5**

## Perceptions of Fairness of Own Taxes: Accurate Respondents versus All Respondents



Difference in percentage of respondents choosing "somewhat" and "very" fair, by implication of quiz questions



Source: Author's calculations.

The notable exception was among people who saw the questions suggesting that higher-income people pay low taxes. Respondents who did better on those questions described their own taxes as fair 54 percent of the time compared with only 47 percent of those who saw that same set but performed poorly. One possible explanation, not testable from the data collected here, is that those who knew about aspects of the tax code that benefit those with higher incomes were reminded of the ways in which they themselves benefit on their taxes from their tax knowledge.

## IMPLICATIONS AND CONCLUSION

Above all, the Vox quiz experiment showed that focusing respondents' attention on particular aspects of the tax code had sizeable effects on their attitudes about the distribution of tax liability and on their perceptions their own taxes' fairness.

The strength of these results is especially striking because of the unusual pool of participants. Vox readers are part of the most politically engaged public, people who not only follow the news but are interested enough in tax policy to voluntarily take a quiz on the subject. Consequently, they are also likely to be more confident of their own knowledge and opinions than the average person, and they are plausibly less likely to be swayed by a few survey questions than people coming to the topic with much less background information. And yet a few survey questions provoked substantial changes in attitudes.

The Vox quiz experiment offers some intriguing avenues for additional research on perceptions of tax fairness.

The different effects of questions about lower- and higher-income people are worthy of additional exploration. Do Americans generally respond more strongly to factual information about taxes paid by lower-income people? Are the effects of the questions concentrated among certain income levels? Does factual information about taxes paid by higher-income people have a larger effect among less politically engaged people, who might be less familiar with the political debates about top marginal tax rates, loopholes, or overseas tax havens? And would the effects on perceptions of fairness have been inverted if the pool of respondents were more conservative?

We must also grapple with the fact that all the factual questions appeared to depress perceptions of fairness. A short, difficult quiz is an unusual format for information dissemination, so it may not be a good model for understanding how factual information typically affects policy attitudes. Moreover, forcing respondents to think about taxes paid by lower- or higher-income people might simply have drawn their attention to income inequality and thereby depressed their feelings of fairness, not just about taxes but about the economic system more broadly. Nonetheless, the possibility that ignorance is bliss is worth some theoretical consideration. In an ideal world, taxpayers would be both informed about and accepting of their tax responsibilities. It may be that there is a trade-off between those two goals. Far more research is necessary, however, to assess this possibility.

In the United States, a majority of Americans have consistently held that their tax burdens are fair.<sup>7</sup> Yet what exactly “fairness” means, and how respondents form opinions about their own tax fairness, is not well understood. This demonstration points toward several intriguing hypotheses worthy of additional research.

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<sup>7</sup> “Taxes,” In Depth: Topics A to Z, Gallup, accessed March 7, 2017, <http://www.gallup.com/poll/1714/taxes.aspx>.

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## APPENDIX A: SURVEY INSTRUMENT

Correct answers are **bolded**.

### TREATMENT 1: THE WEALTHY PAY A LARGE AMOUNT IN TAXES

1. In 2014, the highest-earning 20 percent of households paid what share of all federal income taxes?<sup>8</sup>
  - 74 percent
  - 79 percent
  - **84 percent**
  - 94 percent
2. The federal income tax system imposes higher tax rates on higher levels of income. The range of incomes subject to a certain tax rate is known as a...
  - Margin
  - Score
  - Projection
  - **Bracket**
3. What's the federal income tax rate for the top range of incomes?<sup>9</sup>
  - 29.6 percent
  - 34.6 percent
  - **39.6 percent**
  - 44.6 percent
4. Since 2008, the average federal tax rate paid by the top 1 percent has gone up. By how much has it increased?<sup>10</sup>
  - 5 percentage points
  - **6 percentage points**
  - 8 percentage points
  - 10 percentage points

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<sup>8</sup> Laura Saunders, "Top 20% of Earners Pay 84% of Income Tax," *Wall Street Journal*, April 10, 2015, <http://www.wsj.com/articles/top-20-of-earners-pay-84-of-income-tax-1428674384>.

<sup>9</sup> Kyle Pomerleau, "2016 Tax Brackets," *Tax Foundation* blog, October 14, 2015, <http://taxfoundation.org/article/2016-tax-brackets>.

<sup>10</sup> Jeanne Sahadi, "Taxing the Rich: The Record under Obama," *CNN Money*, January 30, 2015, <http://money.cnn.com/2015/01/30/pf/taxes/obama-taxes-rich/>.

## TREATMENT 2: THE WEALTHY DO NOT PAY A LOT IN TAXES

1. Which billionaire famously said that he paid a smaller share of his income in taxes than his employees?<sup>11</sup>
  - **Warren Buffett**
  - Peter Thiel
  - Jeff Bezos
  - Jim Walton
2. The top income tax bracket rate has gone down since 1950. How much lower is it now than it was then?<sup>12</sup>
  - About 40 percentage points
  - **About 50 percentage points**
  - About 60 percentage points
  - About 70 percentage points
3. The 500 largest US companies are holding a substantial amount of profits offshore to avoid US taxes. Roughly how much taxable money is estimated to be held overseas by these companies?<sup>13</sup>
  - \$300 billion
  - \$800 billion
  - **\$2.1 trillion**
  - \$6.1 trillion
4. Special provisions in the tax code let some people reduce their taxes substantially. These provisions are commonly known as...
  - Margins
  - **Loopholes**
  - Scores
  - Projections

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<sup>11</sup> Warren E. Buffett, "Stop Coddling the Super-Rich," *New York Times*, August 14, 2011, <http://www.nytimes.com/2011/08/15/opinion/stop-coddling-the-super-rich.html>.

<sup>12</sup> "U.S. Federal Individual Income Tax Rates History, 1862-2013 (Nominal and Inflation-Adjusted Brackets)," *Tax Foundation* blog, October 17, 2013, <http://taxfoundation.org/article/us-federal-individual-income-tax-rates-history-1913-2013-nominal-and-inflation-adjusted-brackets>.

<sup>13</sup> David Alexander and Eric Beech, "Big U.S. Firms Hold \$2.1 Trillion Overseas to Avoid Taxes: Study," *Reuters*, October 6, 2015, <http://www.reuters.com/article/us-usa-tax-offshore-idUSKCN0S008U20151006>.

## TREATMENT 3: THE POOR PAY A LOT IN TAXES

1. How many states tax groceries?<sup>14</sup>
  - 14
  - 25
  - 32
  - 40
2. The lowest-income Americans—those in the bottom 20 percent—paid what percent of their income in payroll taxes that fund Social Security and Medicare.
  - 8.2 percent
  - 9.2 percent
  - 12.1 percent
  - 13 percent
3. What do the lowest-income Americans—those in the bottom 20 percent—pay in average combined state and local taxes?<sup>15</sup>
  - 8.5 percent
  - 10.9 percent
  - 12.1 percent
  - 13.0 percent
4. A tax, like the sales tax, that takes a larger share of income from poor people than from richer people is known as a...
  - progressive tax
  - **regressive tax**
  - digressive tax
  - transgressive tax

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<sup>14</sup> The data for this answer come from a 2009 brief from the Center on Budget and Policy Priorities. As of March 2017, however, the 2009 brief has been replaced with 2017 data (currently, 13 states tax groceries) and retitled; the 2009 brief is inaccessible. See Figueroa and Waxman (2009).

<sup>15</sup> See Institute on Taxation & Economic Policy (2015).

## TREATMENT 4: THE POOR DO NOT PAY A LOT IN TAXES

1. In 2016, what share of US households didn't pay any income tax to the federal government?<sup>16</sup>
  - 38.2 percent
  - **45.6 percent**
  - 50.1 percent
  - 75.3 percent
2. In 2014, the bottom two-thirds of households paid roughly how much of the total income taxes collected by the federal government?<sup>17</sup>
  - 2 percent
  - **6 percent**
  - 8 percent
  - 10 percent
3. On average, people with income under \$15,000 a year pay about what share of their income in federal income taxes?<sup>18</sup>
  - 0 percent
  - -5 percent
  - **-14 percent**
  - -20 percent
4. In the US tax system, some tax credits can lower the amount of income tax owed below zero, meaning that the government pays the tax filer instead of the other way around. These tax credits are called...<sup>19</sup>
  - deductible
  - transferable
  - **refundable**
  - reclaimable

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<sup>16</sup> Tax Policy Center, “T15-0138 – Tax Units with Zero or Negative Income Tax,” last modified October 2, 2015, accessed January 22, 2017, <http://www.taxpolicycenter.org/model-estimates/tax-units-zero-or-negative-income-tax/tax-units-zero-or-negative-income-tax>.

<sup>17</sup> Drew DeSilver, “High-Income Americans Pay Most Income Taxes, but Enough to Be ‘Fair?’” *FactTank* (blog), Pew Research Center April 13, 2016, <http://www.pewresearch.org/fact-tank/2016/04/13/high-income-americans-pay-most-income-taxes-but-enough-to-be-fair/>.

<sup>18</sup> Richard Morrison, “Chart of the Day: Effective Tax Rates by Income Category,” *Tax Foundation* blog, September 28, 2012, <http://taxfoundation.org/blog/chart-day-effective-tax-rates-income-category>.

<sup>19</sup> “Refundable vs. Non-Refundable Tax Credits: There Are Two Main Types of Credits That Can Reduce Your Tax Bill,” Internal Revenue Service, accessed March 8, 2017, <https://www.irs.com/articles/refundable-vs-non-refundable-tax-credits>.

## OPINION QUESTIONS

1. Taking into account all the local, state, and federal taxes that you pay, do you think your taxes are fair?
  - Very unfair
  - Somewhat unfair
  - Neither fair nor unfair
  - Somewhat fair
  - Very fair
2. Taking into account all the local, state, and federal taxes that people pay, please tell me if you think lower-income people are paying their fair share in taxes, too much, or too little?
  - Fair share
  - Too much
  - Too little
  - Don't know
3. Taking into account all the local, state, and federal taxes that people pay, please tell me if you think upper-income people are paying their fair share in taxes, too much, or too little?
  - Fair share
  - Too much
  - Too little
  - Don't know
4. What is the highest percentage you think would be fair for anyone to pay in all their taxes combined, no matter how high their income?
  - [Sliding scale: 0% to 100% in one-point increments]
5. Agree or disagree: Our government should redistribute wealth by heavy taxes on the rich.
  - Strongly agree
  - Agree
  - Neutral
  - Disagree
  - Strongly disagree

## DEMOGRAPHIC QUESTIONS

1. Have you filed your federal income taxes?
  - Yes
  - No
2. What is your zip code?
  - [Free-response box labeled “Five digit ZIP”]
3. What is your gender?
  - Man
  - Woman
  - Other



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