

An Automated Refusal Conversion Strategy for Web Surveys

Taylor Lewis¹, Mark Gorsak¹, Naomi Yount²

¹ U.S. Office of Personnel Management

² Westat

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Corresponding Author: Taylor Lewis (Taylor.Lewis@opm.gov)

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Abstract

Survey research organizations typically attempt to convert sampled individuals who initially refuse to participate in a survey. This is especially true for interviewer-administered surveys. However, the use of conversion attempts in self-administered, Web-based surveys is not as straightforward to implement. This paper presents results from an experiment conducted during the 2017 Federal Employee Viewpoint Survey (FEVS) to evaluate an automated refusal conversion strategy whereby a portion of sampled individuals was given the opportunity to opt out from the survey. Specifically, approximately 10% of the overall FEVS sample, or about 112,000 full- and part-time employees of the U.S. federal government, was offered the opportunity to stop receiving additional email solicitations. Before effectively being added to an “unsubscribe” list, however, the individual was asked to cite the primary reason for choosing not to take the FEVS (e.g., too busy, confidentiality concerns, survey results not used to change anything in the workplace). A randomly assigned subset of the experimental cohort was given an appeal, tailored to the reason provided, in the form of a concise list of assurances and facts about the survey and its data collection and reporting protocols. At that point, the individual could either confirm wishing to opt out or click a link to navigate to the start of the survey. Because the complementary subset did not receive the appeal, only a confirmatory message stating no more reminder emails would be sent, we are able to report on the efficacy of the strategy in convincing individuals who may not have been initially inclined to participate to do so.

1. Background

Few surveys conducted in practice are mandatory in nature. More commonly, contingent on making contact, the sampled individual (or entity) is asked to participate in the survey, but the decision to do so is ultimately a voluntary one. A profusion of evidence has emerged over the last two decades indicating refusal rates in surveys worldwide are increasing (Groves and Couper, 1998; Atrostic et al., 2001; de Leeuw and de Heer, 2002; Curtin et al., 2005; Brick and Williams, 2013; Dutwin et al., 2014). A higher refusal rate decreases a survey’s response rate, which increases the risk of nonresponse bias. One commonly adopted strategy to combat this trend is to attempt refusal conversions, whereby initially refusing individuals are persuaded to reconsider their decision. Typically, a distinction is first made between “hard” and “soft” refusals. Hard refusals are characterized by unequivocal directives to be removed from the survey list and no longer contacted. On the other hand, soft refusals are characterized by reasons such as being temporarily unavailable, unsure, or indifferent to the survey and its objectives. As Dutwin et al. (2014) note, survey organizations generally focus refusal conversion attempts on soft refusals exclusively.

Refusal conversion attempts are most often utilized in interviewer-administered surveys (e.g., Groves and McGonagle, 2001; Triplett, 2002; Cominole et al. 2008; Olson et al., 2011). If interviewers are trained to use a contact history instrument (CHI) (Maitland et al., 2009), refusal report form (RRP) (Lavrakas, 1993), or something similar to capture, to the extent possible, reasons for the refusal, that information can be used to tailor a refusal conversion attempt later in the data collection period. Such attempts are certainly worthwhile, as they have been shown to result in conversion rates of 10 – 30% (Dutwin et al., 2014), and may recruit respondents who differ from those not requiring conversion with respect to key survey outcome variables (O’Neill et al., 1995; Kendrick et al., 2001). Granted, those requiring conversion have been found to be more prone to providing incomplete data (Yan et al., 2010) and to spending less time completing the survey (Miller and Wedekin, 2003; Dahlhamer et al., 2008), which introduces data quality concerns.

By comparison, refusal conversion attempts are less frequently utilized in self-administered surveys. This is largely due to the ambiguity distinguishing a refusal from other forms of nonresponse. The vast majority of refusals are tacit, with the individual simply ignoring the survey request without providing feedback. Indeed, it is quite rare for

individuals to contact the survey administration team to explicitly refuse. Providing a few numbers to put things into perspective, as reported in U.S. Office of Personnel Management (2017), only 94 of the 941,425 individuals sampled as part of the Web-based 2016 Federal Employee Viewpoint Survey (FEVS) contacted survey administrators to request to be removed from the survey roster. Of these, 26 were considered hard refusals and 58 were considered soft refusals. A conversion attempt was made for the soft refusals only; 8 of those individuals (about 14%) ended up completing the survey.

For self-administered mail surveys, aside from cost savings that can be achieved, it has been argued in the literature that offering the respondent the opportunity to opt out has the potential to increase, not decrease, the likelihood of participating, because it engenders trust and empathy with the researcher (Sudman, 1985; Mullen et al., 1987). Similarly in spirit, Anderson (2015) recommends administrators of online panels abide by the statute in the CAN-SPAM Act of 2003 requiring all unsolicited commercial emails to contain a visible unsubscribe link. In this paper, we present results from an experiment fielded to evaluate a novel technique for automating refusal conversions in a Web-based survey of individuals by way of a link to opt out (i.e., unsubscribe) embedded in the survey invitation email and reminders. Prior to granting the request to opt out, however, individuals were asked to first indicate the single most influential reason for choosing not to participate. In response to the reason cited, a last-moment appeal was presented in hopes that the individual would reconsider and decide to take the survey. A control group was not given the last-moment appeal, enabling us to assess the effectiveness of the strategy.

This paper is structured as follows. Section 2 details the experimental design and provides background information about the survey on which it was implemented. Section 3 presents key findings, and Section 4 concludes with a discussion and ideas for further research.

2. Data and Experimental Design

Data presented in this paper are drawn from the 2017 FEVS (www.opm.gov/fevs). First administered in 2002, the FEVS—formerly known as the Federal Human Capital Survey—is an annual organizational climate survey administered by the U.S. Office of Personnel Management (OPM). The preponderantly attitudinal survey is designed to measure various facets of an employee’s overall satisfaction level, such as one’s level of enjoyment with the kind of work performed, perceptions of senior leadership within the agency, and opportunities for advancement. While the primary survey stakeholders are agency human resources managers seeking to identify aspects of the organization that are working well as well as those that may require intervention, Fernandez et al. (2015) summarize the ever-growing body of public administration literature using FEVS data to investigate other organizational phenomena such as diversity and performance management, recruitment and retention, and perceptions of equity and fairness.

With few exceptions, the sampling frame for the survey is produced from an extract of the Statistical Data Mart of the Enterprise Human Resources Integration (EHRI-SDM), a large-scale database of U.S. federal government personnel managed by OPM. The FEVS target population is full- or part-time, permanent (i.e., non-seasonal and non-political) civilian personnel employed with their agency for at least six months before survey commencement. Based on the hierarchically stratified sample design described in U.S. Office of Personnel Management (2017), a total of 1,139,882 employees from 85 distinct agencies were selected to participate in the 2017 FEVS fielded between May 2 and June 22, 2017. Sampled employees were sent an email invitation to participate containing a personalized URL to access the survey, and five reminder emails were sent to individuals who had not yet completed the survey in weekly increments thereafter. Hence, despite the agencies having staggered start and end dates, each had a field period lasting precisely six weeks.

A total of 112,576 employees, or approximately 10% of the overall 2017 FEVS sample, were randomly designated for the opt out experiment. As shown in Figure 1, the opportunity to opt out was offered in all email solicitations via a link labeled “Click here if you are considering not participating in the FEVS.” This link was absent in emails sent to employees not designated to be part of the opt out experiment.

Figure 1: Example 2017 FEVS Email Body Containing a Link to the Opt Out Survey.

Your opinions matter! Let your leadership know how you feel about your job, your supervisor, and your agency. The Federal Employee Viewpoint Survey provides a safe and confidential way for you to voice your opinions.

[Click here to access your survey](#)

If the link does not take you directly to the survey, copy and paste the following into a browser window:
<PERSONALIZED URL HERE>

[Click here if you are considering not participating in the FEVS](#)

Please DO NOT forward this e-mail, as it contains your personalized link to the survey. Answering the questions will take about 25 minutes, and you may use official time. While participation is voluntary, your feedback is important.

This is an official survey from OPM, to see all current surveys from OPM [click here](#).

Reply to this message if you have any questions or difficulties accessing the survey, or call our Survey Support Center toll free at: 1-855-OPM-FEVS (1-855-676-3387).

OPM is committed to collecting the viewpoints of all Federal employees participating in the FEVS. With that in mind, we commit ourselves to providing meaningful access to our survey for individuals with disabilities. If the format of any material in the survey interferes with your ability to complete it due to an issue with accessibility caused by a disability, such as assistive technology-compatibility, please contact evs@opm.gov for additional assistance.

Thank you for taking the time to complete the survey.

When the link to opt out was clicked, a short survey was launched. The screenshot in Figure 2 shows the initial landing page, which poses the question “Would you say that you are unsure about participating in the FEVS, or that you do not wish to participate?” The purpose of this question was to gauge the nonresponse conviction level—in essence, to be able to make a proxy distinction between soft and hard refusals. Regardless of one’s answer (i.e., not restricting focus only to soft refusals as is often done in practice), the individual was subsequently presented with the question shown in Figure 3, which was crafted to determine the single most influential reason for not wanting to participate in the 2017 FEVS. Six options were provided (e.g., being too busy, data confidentiality concerns), as was a write-in option for someone whose primary reason was not listed. Two research team members independently recoded 176 write-in responses into new or existing response categories, with 28 initially discordant recodes requiring reconciliation. Example reasons unaccounted for by the original set of response categories include a recent or pending employment status change, technical issues accessing the survey, and the belief that one had already completed the survey. In the end, 126 write-in responses were categorized and the remaining 50 were classified as “other.”

Figure 2: Screenshot of Opt Out Survey Landing Page and First Question Gauging Nonresponse Conviction Level.

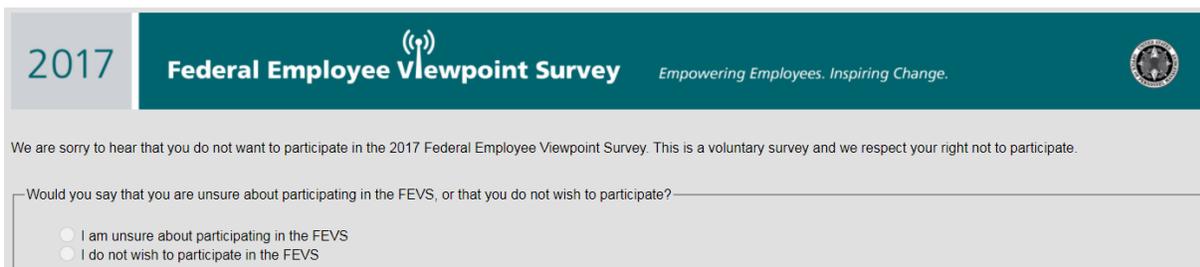


Figure 3: Screenshot of Second Opt Out Survey Question Asking One’s Primary Reason for Refusing to Participate.

2017 **Federal Employee Viewpoint Survey** Empowering Employees. Inspiring Change.

We would like to understand why people choose not to take the FEVS. Before we remove you from the survey participation list, could you please respond to the following question?
Which of the reasons below MOST influenced your decision not to take the survey?

- I am too busy to take the survey
- I receive too many requests to take surveys
- Survey results are not used to change anything in my workplace
- I am concerned about the confidentiality of my responses
- Participation in the survey is not supported by leadership in my agency
- Survey results are never shared with employees
- Other, please specify:

After answering the question shown in Figure 3, a randomly predetermined 75% of individuals received a last-moment appeal tailored to the response given. The appeal was succinct, taking the form of a bulleted list of assurances and survey facts about which the individuals may not have been aware. As one example, Figure 4 shows the appeal for individuals who indicated being too busy to take the survey. Individuals choosing “Other” as the reason for not wanting to take the survey were presented with a generic appeal of four bullet points drawn verbatim from other tailored appeals. On all appeal pages, immediately below the bulleted list was a link labeled “I will take the survey now,” which would navigate the individual to the start of the survey. If instead the individual clicked on the button labeled “I do not want to take the survey,” a short message appeared on a new page indicating that the individual would no longer receive email reminders to participate from the FEVS administration team, but that the survey link would remain active in case the individual changed his or her mind before the end of the field period. Note that the complementary 25% of individuals were routed directly to this same page after answering the item shown in Figure 3. Because they were not given the last-moment appeal, they serve as a control group for quantifying the effectiveness of the automated refusal conversion strategy.

Figure 4: Screenshot of the Tailored Appeal Presented to Individuals Who Stated Being Too Busy as Their Primary Reason for Choosing Not to Participate.

2017 **Federal Employee Viewpoint Survey** Empowering Employees. Inspiring Change.

Thank you for providing feedback about why you do not want to take the FEVS. You may already be aware, but let us remind you one last time of a few important points:

- As federal employees ourselves, the FEVS Team understands you are busy and that your time is valuable.
- The survey is sent to the minimum number of federal employees necessary to provide for a representative sample of the government-wide workforce.
- The survey should only take about 25 minutes to complete.
- You are allowed to complete the survey during regular work hours but, if necessary, you can complete it during non-work hours from any Web browser.

[I will take the survey now](#)

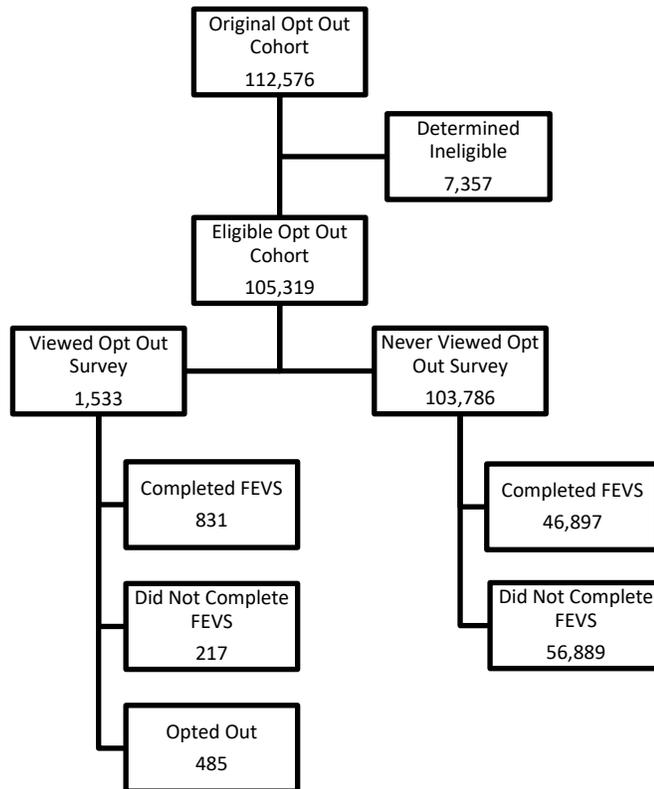
[Previous Page](#) [I do not want to take the survey](#)

3. Results

Figure 5 is a flowchart providing a summary of dispositions and associated counts for individuals selected to be part of the 2017 FEVS opt out experiment. Of the original count of 112,576 individuals, 105,319 were deemed eligible to be included in the present analyses. We excluded from consideration individuals who had no chance to participate, such as being caused by the failure to acquire a valid email address, administrative records indicating the departure from one’s position between the time of sample selection and survey administration, or being on temporary assignment or an approved extended absence during the field period. We were surprised, and somewhat discouraged, to observe only 1,533 individuals (about 1.5% of those eligible) clicked on the link to launch the opt out survey, especially considering the overall response rate to the 2017 FEVS was 45.5%. A small-scale pilot study conducted during the 2016 FEVS found similarly low click rates, but it was speculated at the time that the low rates were caused by introducing the opt out link too late in the field period—at the second reminder, corresponding to the midway point of the field period—when the majority of responses have already been obtained, and also that the link was placed too far towards the bottom of the email body.

Of the 1,533 individuals clicking on the opt out survey link, 831, or 54.2%, ended up completing the 2017 FEVS. This number includes 79 people who initially opted out but later took the survey. A total of 485 individuals opted out and never took the survey, while 217 viewed the page but neither opted out nor returned to the survey. The response rate was 9 percentage points lower for individuals who never clicked on the opt out survey: 46,897 out of 103,786, or 45.2%. This was a statistically significant difference ($t = 7.03$; $p < 0.01$).

Figure 5: Flowchart Summarizing Dispositions and Counts for Individuals Designated to be Part of the 2017 FEVS Opt Out Experiment.



Restricting the scope to only those individuals who viewed the opt out survey, Table 1 presents conversion rates by nonresponse conviction level and the primary nonresponse reason cited. In calculating these conversion rates, we considered a case to be a refusal conversion if he or she answered at least one of the two items in the opt out survey yet was ultimately classified as a complete case using the same definition in U.S. Office of Personnel Management (2017), which is answering at least 21, or 25%, of the 84 core FEVS survey items.

The most striking difference is that between individuals indicating they did not want to participate and individuals who were unsure about participating. For the former, only 20.3% of individuals ultimately completed the FEVS, whereas 62.8% of the latter completed the FEVS. Hence, the refusal conversion strategy was much less effective for individuals who entered with a stronger conviction level about not participating. The conversion rate also exhibits substantial variability amongst the various nonresponse reasons cited. Some of the reasons garnering a lower than average conversion rate were being too busy, receiving too many survey requests, and the sense that survey results would not be used to change anything in the workplace. In contrast, some of the reasons garnering a higher conversion rate were those related to confidentiality concerns or a belief that participation was not supported by agency leadership.

Table 1: FEVS Conversion Rates by Nonresponse Conviction Level and Nonresponse Reason Cited¹.

Condition	Count	Conversion Rate
<i>Nonresponse Conviction Level</i>		
Unsure about participating	325	62.8
Do not want to participate	551	20.3
<i>Nonresponse Reason</i>		
Participation not supported by agency leadership	12	58.3
Claim already completed survey	7	57.1
Confidentiality concerns	186	47.3
Other	50	40.0
Recent employment change	29	37.9
Dislike format / technical issues	34	32.4
Survey results never shared with employees	24	29.2
Survey results are not used to change anything	226	25.2
Too busy	118	22.9
Receive too many survey requests	80	20.0
Indifference	9	0.0

NOTE:

¹Because each item on the opt out survey was voluntary, counts for the conditions listed do not sum to 1,533, the number of individuals we reported as having clicked on the link to start the opt out survey.

Table 2 takes a closer look at the effect of the last-moment appeal by cross-classifying the conversion rates by nonresponse conviction level and nonresponse reason. So as to limit the risk of reporting on findings that may be largely a function of point estimate instability due to small sample sizes, results are suppressed for the nonresponse reason if the count of individuals in either appeal condition was less than 20. Two particularly interesting findings emerge. First, to be expected, individuals stating uncertainty about participating in the 2017 FEVS were more likely to be persuaded to complete the survey via the last-moment appeal. The appeal produced a 14 percentage point increase, whereas the increase was only 8.5 percentage points for individuals stating a desire not to participate from the outset. Second, while the effect of the last-moment appeal was always positive, meaning it prompted more completes than when absent, the effect sizes varied substantively amongst the primary nonresponse reasons cited. The largest increase was observed for those citing confidentiality concerns, where the appeal reminding the respondent all FEVS items are voluntary and assured the respondent that no survey results would be provided to superiors in such a way that individual responses could be identified drove the conversion rate up 33 percentage points to 53.6%. The smallest increase observed was the 8.8 percentage point change observed for individuals who felt the survey and its results would not be used to change anything in the workplace. Although the appeal page pointed to resources containing concrete examples of organizational changes that have been implemented as a result of the FEVS, this was the only increase summarized in Table 2 that was not statistically significant. All others were significant at the $\alpha = 0.05$ level.

Table 2: Conversion Rates by Appeal Condition Classified by Nonresponse Conviction Level and Nonresponse Reason Cited¹.

Conditions	<i>No Appeal</i>		<i>Tailored Appeal</i>	
	Count	Conversion Rate	Count	Conversion Rate
<i>Nonresponse Conviction Level</i>				
Unsure about participating	91	52.7	234	66.7
Do not want to participate	124	13.7	427	22.2
<i>Nonresponse Reason</i>				
Confidentiality concerns	35	20.0	151	53.6
Survey results are not used to change anything	54	18.5	172	27.3
Too busy	22	9.1	96	26.0
Receive too many survey requests	21	9.5	59	23.7

NOTE:

¹Because each item on the opt out survey was voluntary, counts for the conditions listed do not sum to 1,533, the number of individuals we reported as having clicked on the link to start the opt out survey.

4. Discussion

The purpose of this paper was to present results from an experiment fielded during the 2017 FEVS in which a portion of sampled individuals was given the opportunity to opt out from the Web-based survey and terminate receipt of subsequent reminder emails. Prior to granting the request to opt out, however, the individual was asked to report his or her nonresponse conviction level as well as the primary reason for declining to participate. From there, individuals were randomly partitioned into two groups: one that received a last-moment appeal tailored to the reason provided and another that received no appeal.

Although we were surprised by the extremely low percentage of individuals who noticed and clicked on the link to launch the opt out survey (about 1.5%), we found that doing so yielded promising results. These individuals were far more likely to complete the survey than opt out, and they were even more likely to complete the survey than those who never clicked on the link. Taken together, these two points suggest that the strategy is a net positive feature practitioners could consider incorporating into other Web-based surveys to identify tacit refusals and help automate the conversion process. Of course, it could also serve as a tool for nonresponse bias analyses (Gorsak et al., 2018).

Further research could look into alternative methods to get more individuals to locate and click on the opt out link embedded within the survey invitation and reminder emails. This is hardly a new problem, as Couper (2008, p. 325) asserts "...relatively little can be done with the e-mail invitation to ensure it is opened, read, and acted on. This remains our biggest challenge as Web survey designers." Rather than further manipulations to the email invitation and reminders, perhaps a future study could examine the impact of offering the opportunity to opt out either via a separate follow-up email or altogether different mode.

Another key finding from this study was that the impact of the last-moment appeal was more pronounced on the conversion rate for those who indicated being unsure about their intent to participate as opposed to those indicating at the outset that they did not want to participate. This was to be expected, as we viewed the former and latter as respective proxies of sorts for "soft" and "hard" refusals. As was noted, however, effect sizes varied notably amongst the primary nonresponse reason cited, which may in turn be a function of varying levels of persuasion achieved by the tailored last-moment appeals. Further research could look into optimizing the appeal language with feedback, say, from subject matter experts or focus groups comprised of FEVS-eligible employees.

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