

Survey Terminators: They Won't Be Back, But Does It Matter?

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Abstract

Survey organizations are increasingly concerned about the issue of nonresponse bias in national RDD surveys. A portion of those who refuse to be interviewed are people who agree to participate in a survey but terminate before completion. Unlike other non-respondents, survey organizations usually have some information about their opinions and characteristics by virtue of the fact that most answer at least a few initial questions in the interview. Terminators represent a non-trivial portion of people who begin an interview – about 12% on average in Pew surveys – and are distinctive in several respects. They tend to be older, less educated, and have lower socioeconomic status. They are more likely to decline to answer attitudinal questions, and significantly less likely to say they are following the news in newspapers or on television, paying close attention to news stories, registered to vote, or engaging in volunteer work. While they are less likely to express political opinions, there are no consistent differences in the balance of opinions they provide across a range of social and political questions examined, compared with people who complete the survey. Whether this is good news or bad depends on whether terminators represent only themselves or a much broader group of nonrespondents.

I. Introduction

Survey organizations are increasingly concerned about the issue of nonresponse bias in national RDD surveys. Potential respondents are harder to reach, and the number who refuse to be interviewed is rising. A portion of these refusals are people who agree to participate in a survey but terminate before completion. Unlike other nonrespondents, survey organizations usually have some information about their opinions and characteristics by virtue of the fact that most answer at least a few initial questions in the interview. These answers may provide insight about the nature of at least part of the nonresponse bias for a given survey.

Variably described as “break-off,” “partial,” or “terminated,” these cases are a part of the total nonresponse in surveys today. Our definition of a terminator is any respondent who answers at least one substantive question, quit the interview prematurely, and never completed the survey. In this paper, we examine the terminated cases in several surveys conducted between 2002-2006 that dealt with a range of topics, including opinions about American foreign policy, familial relationships and responsibilities, news media consumption, civic engagement, and general political attitudes. We report the number of terminations in each survey, the rate at which respondents terminated as each survey proceeded, and the demographic characteristics (where available) and substantive responses of terminators. Finally, we estimate how our survey estimates would change if the terminators had completed the survey and were included in the final results.

Terminators represent a non-trivial portion of people who begin an interview – about 12% on average in Pew surveys – and are distinctive in several respects. They tend to be older, less educated, and have lower socioeconomic status. They are more likely to decline to answer attitudinal questions, and significantly less likely to say they are following the news in newspapers or on television, paying close attention to news stories, registered to vote, or engaging in volunteer work. While they are less likely to express political opinions, there are no consistent differences in the balance of opinions they provide across a range of social and political questions examined, compared with people who complete the survey. That is, terminators are not more liberal or conservative than the rest of the public.

II. Overview of Termination Rates

Across nine different studies (eight of which were conducted by the Pew Research Center), the termination rate varied from 6% to 16%, with a median of 12%. The termination rate is computed as the number of terminations divided by the sum of completed cases plus terminations. Most of the studies are straightforward national samples of adults using RDD, though one survey interviewed respondents 15 and older and involved large oversamples of respondents under 38 years of age, while another was an RDD sample drawn from the cell phone number frame. All of the studies were conducted by one of two field houses, Princeton Data Source, LLC, and SRBI, Inc. Table 1 provides an overview. The mean length was approximately 20 minutes for each survey, but the Cell Phone Study was an exception. In that survey, the average interview length was 12 minutes for the cell RDD sample and 10 minutes for the landline RDD sample.

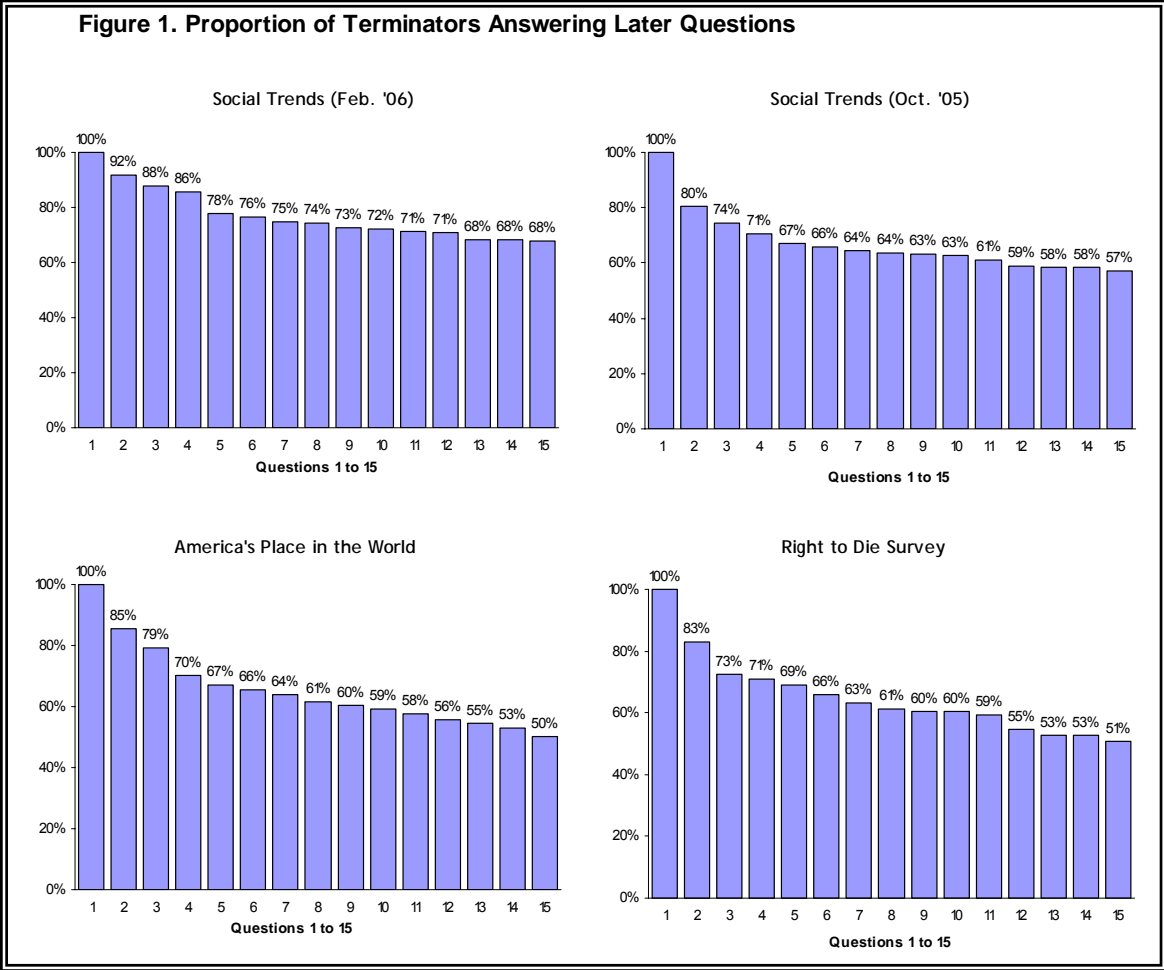
Table 1. Overview of Studies

Study	Date	Topics	Sample	Com- pletes	Termina- tions	Termina- tion rate
Civic Engagement	Apr. 2002	Civic and political participation	National RDD with oversample of youth	3247	492	0.13
News Interest Index	June 2003	Political attitudes	National RDD	2459	167	0.06
Media Consumption	Apr. 2004	News media consumption	National RDD	3000	559	0.16
America's Place in the World	Oct. 2005	Foreign policy attitudes	National RDD	2006	293	0.13
Social Trends	Oct. 2005	Family relations	National RDD	3014	484	0.14
Right to Die	Nov. 2005	End-of-life decisions	National RDD	1500	106	0.07
Social Trends	Feb. 2006	Food, health, gambling	National RDD	2250	297	0.12
Cell Phone Study (landline frame)	Mar. 2006	Cell phone use; political attitudes	Landline RDD	752	54	0.07
Cell Phone Study (cell phone frame)	Mar. 2006	Cell phone use; political attitudes	Cell phone RDD (with \$10 incentive)	750	47	0.06

III. When Do Terminations Occur?

Among terminators, the biggest single defection from the survey occurs immediately after the first question in most of the surveys examined. As Figure 1 shows, 20% of those who ultimately terminated quit after the first question in the October 2005 Social Trends survey, and 17% did so in the November 2005 “Right to Die” study. Interviewers work hard to get the respondent to the first question, knowing that most who answer will finish the survey. But many who do provide an answer quit at that point.

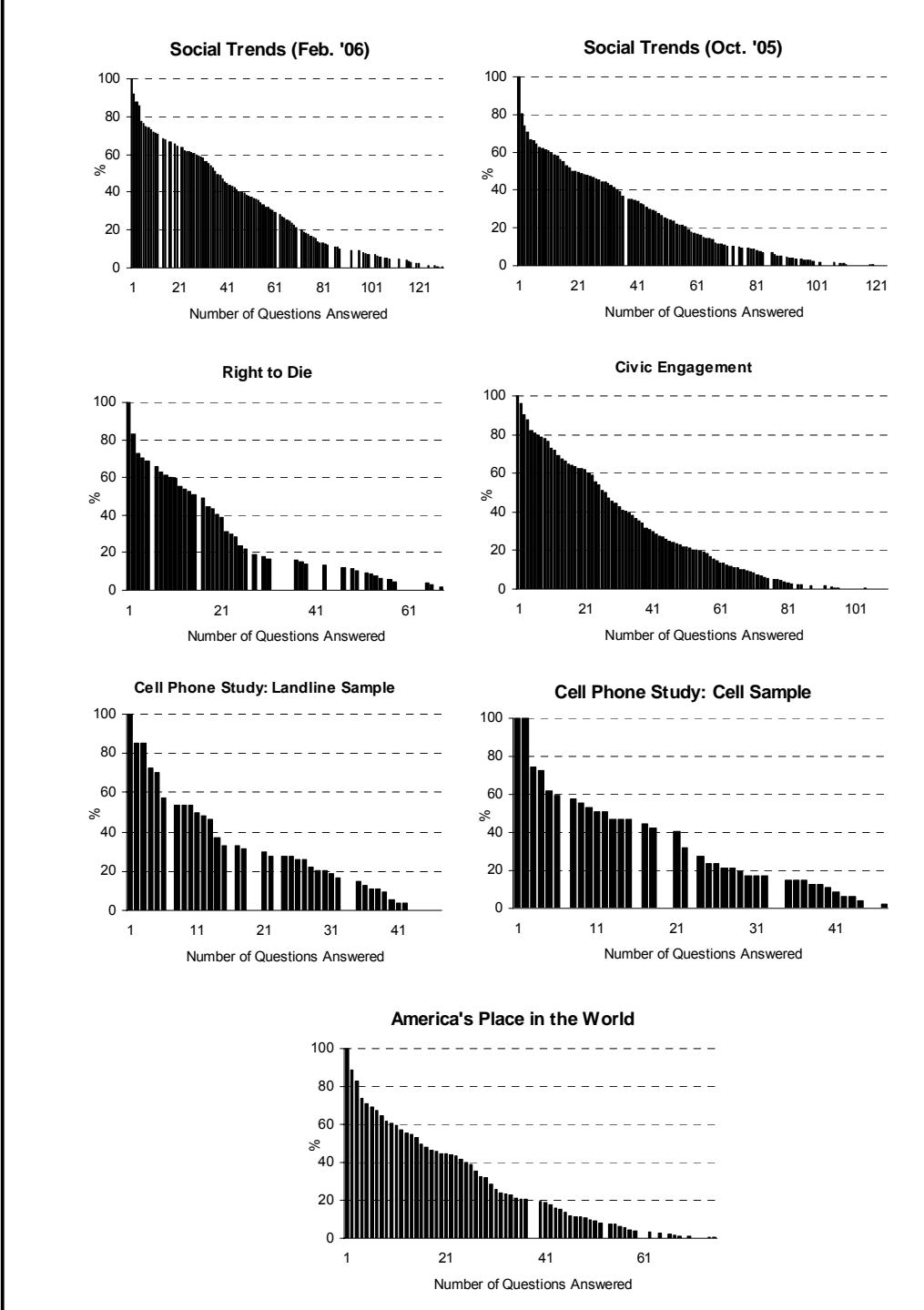
Subsequently, the falloff is more gradual. There is still a steeper slope in the early stages than later, but less so than between the first and subsequent questions. Relatively few questions provoke a noticeable drop; one exception is an open-ended item on the “America’s Place in the World” survey. The question is administered to a random half of the sample and asks “what is America’s most important international problem today?” After this question, 20 of 125 respondents on the questionnaire form (16%) terminate.



Looking at the pattern of terminations beyond the early stages of the interview allows us to assess whether there is evidence for the notion of a time-length “tipping point” in surveys. Figure 2 plots the falloff in the number of respondents across the entire interview in seven studies. As shown above, each graph has a big drop at the first or second questions, followed by a fairly steady decline. But in three of the studies – America’s Place in the World and the two Social Trends surveys – the decline becomes somewhat steeper around questions 25-30, or about 5-7 minutes into the interview.

In most of the studies, the drop-off eventually flattens out and the rate of terminations is much lower than earlier in the survey. A reasonable inference would be that once past a certain point in the survey, most respondents have accepted the legitimacy of the interview and being questioned about the topics at hand; terminations beyond that point may be more idiosyncratic in nature (e.g., a result of interruptions at the respondent's home) or simply a response to fatigue.

Figure 2. Proportion of Terminators Answering Later Questions Across the Entire Survey



IV. Early versus Late Termination

Many treatments of terminators, including ours, tacitly assume that all breakoffs are the same: that earlier breakoffs – people who quit after answering just a few questions – are similar to those who make it further into the interview. That is, we may compare the responses of terminators on, say, the 20th question of the survey with respondents who completed the interview and draw a conclusion about the potential bias from this source of nonresponse. But if only a minority of all terminators survived until the 20th question, can we consider them representative of the entire pool of terminated cases?

The validity of this assumption seems worth testing given the common-sense notion that terminations occur for a range of reasons. Early terminations may be related more to aversion to the topic (and perhaps the cognitive challenge of the interview on a subject of little interest), while later terminations may be more idiosyncratic, resulting from random events and circumstances (interruptions from children or visitors, demands of cooking, another phone call). If the mechanism prompting early terminators to quit is different from that triggering late terminations *and* related to the Y variables being measured, then the responses from late terminators will be biased for responses from early terminators.

Table 2. Comparison of Means for Early and Late Terminators

Question	Early Terminators ¹	Late Terminators ²	Diff.	Source
Demographics	%	%		
Urban-area resident	45	36	-9	Social Trends (Feb. '06)
Urban-area resident	33	28	-5	America's Place in the World
Urban-area resident	35	38	+3	Social Trends (Oct. '05)
Male	42	49	+7	Social Trends (Feb. '06)
Male	44	48	-4	News Interest Index (June '03)
Male	45	44	-1	Civic Engagement Survey
Male	49	48	-1	Social Trends (Oct. '05)
Quality of Life				
Lived in community entire life	20	30	+10*	Civic Engagement Survey
Excellent overall quality of life	35	28	-7	Social Trends (Feb. '06)
Very happy with life these days	37	38	+1	Social Trends (Oct. '05)
Rate community as excellent place to live	35	34	-1	Civic Engagement Survey
Political/Social Attitudes				
Approve of Bush's job as President	35	39	+4	Media Consumption Study
Approve of Bush's job as President	34	33	-1	America's Place in the World
I can make a great difference in solving community problems	11	11	0	Civic Engagement Survey
News Consumption				
Watched TV news yesterday	58	79	+21*	Media Consumption Study
Read newspaper regularly	44	57	+13*	Media Consumption Study
Listened to news on radio yest.	34	47	+13*	Media Consumption Study

¹Early Terminators are break-off respondents who answered 10 or fewer questions. Sample sizes range from 70 to 189.

²Late Terminators are break-off respondents who answered 11 or more questions. Sample sizes range from 90 to 383.

*Indicates means are significantly different at $p < .05$.

To test this assumption, we examined the demographic and attitudinal differences of early and later terminators in the surveys under study here. To do this, we divided them according to whether they answered at least 11 questions. “Early” terminators are those who answered 10 or fewer questions; “Late” terminators answered 11 or more. The results are reported in Table 2.

Early terminators are significantly less likely than late terminators to read a newspaper or watch TV news regularly, or to report having watched TV news yesterday. They are also more likely to say “don’t know” in response to many questions. Otherwise there are relatively few differences. This suggests that at least for the purposes of this analysis, we can consider responses from late terminators as reasonably representative of early responders. In the following section we show that differences between early and later terminators mimic those between terminators in general and respondents who complete the survey.

V. Demographic and Substantive Differences between Completed and Terminated Cases

We proceed then with a metanalysis of how terminated cases compare to completed ones with respect to demographics, behaviors, and attitudes. Although it is rare in surveys to ask demographic questions early in the interview, at least two of the surveys we examine included key demographic indicators among the first questions in the study. Additionally, many of the studies include an important summary political indicator near the beginning – presidential job approval. Others include measures of attention to the news and news media consumption. Collectively, these measures help to round out the profile of the terminators.

We find that among those who start the survey, there are no differences in the rate of termination by age: 12% of those under age 30 quit the survey, compared with 10% of those over 30. Among the younger respondents, there is also no difference in DK/Refused Rate between terminators and those who completed the survey, though there is a slight difference among those 30 and older.

In two studies where the respondent was asked about their level of formal education early in the survey, we found that significantly more people with lower levels of education terminated than was true of the better educated. In one study, respondents with a high school education or less constituted 41% of those who completed the survey, but were 61% of those who terminated. The educational disparity in the terminator group was similar in another survey. It is well known that the distribution of respondent education in most surveys is skewed too high – Pew Research Center surveys typically find 40% with high school or less, compared with the population parameter of 48%. The disparity between terminators and others provides further evidence that less educated people find surveys challenging or otherwise aversive.

We also found that terminators tended to be less engaged politically than those who completed the survey. This was true across a wide range of measures and was apparent in several different surveys. This finding is also related to the lower levels of education among the terminators. Terminators were significantly less likely to have read a newspaper the day before or to regularly get news from radio or television. They were also less likely to say that they regularly followed government and political affairs, volunteered in their community or made a monetary donation to a political campaign. They were just as likely as completed cases to say

they depended on television or newspapers as a main source of news, but significantly less likely to say that radio or the internet were also main sources.

Table 3. Unweighted Means for Completed versus Terminated Interviews

Question	Completed interviews	Terminated interviews	Diff.	Source
	%	%		
Demographics				
High school education or less	41	62	+21*	News Interest Index (June '03)
High school education or less	45	62	+17*	Civic Engagement Survey
Professional/business class	37	22	-15*	News Interest Index (June '03)
Age 65+	18	27	+9*	News Interest Index (June '03)
Age 65+	12	14	+2	Civic Engagement Survey
Currently married	57	51	-6	Social Trends (Oct. '05)
Use the internet	91	87	-4*	Civic Engagement Survey
Male	44	46	+2	News Interest Index (June '03)
Male	43	47	+4	Social Trends (Oct. '05)
Male	46	43	-3	America's Place in the World
Male	47	45	-2	Civic Engagement Survey
Male	46	47	+1	Social Trends (Feb. '06)
Quality of Life				
Excellent overall quality of life	36	32	-4	Social Trends (Feb. '06)
Very satisfied with relationship w/ spouse	80	76	-4	Social Trends (Oct. '05)
Lived in community entire life	25	29	+4	Civic Engagement Survey
Lived in community entire life	30	28	-2	Social Trends (Oct. '05)
Very happy with your life these days	36	39	+3	Social Trends (Oct. '05)
Very satisfied with my standard of living	45	48	+3	Social Trends (Oct. '05)
Very satisfied with my household income	35	38	+3	Social Trends (Oct. '05)
I'm in excellent physical condition	13	10	-3	Social Trends (Feb. '06)
Excellent health	29	26	-3	Social Trends (Feb. '06)
Excellent health	30	31	+1	Social Trends (Oct. '05)
Very satisfied with my family life	74	72	-2	Social Trends (Oct. '05)
Very satisfied with relationship w/ children	84	82	-2	Social Trends (Oct. '05)
Very satisfied my job	58	57	-1	Social Trends (Oct. '05)
Very satisfied with my free time	56	55	-1	Social Trends (Oct. '05)
Very satisfied with relationship w/ parents	76	75	-1	Social Trends (Oct. '05)
Rate community as excellent place to live	36	35	-1	Civic Engagement Survey
Rate community as excellent place to live	43	42	-1	Social Trends (Oct. '05)
Very satisfied with my housing situation	67	67	0	Social Trends (Oct. '05)
Political/Social Attitudes				
Patients should sometimes be allowed to die	78	54	-24*	Right to Die Survey
Ban dangerous books from libraries	45	67	+22*	News Interest Index (June '03)
Immigrants strengthen the U.S.	49	34	-15*	News Interest Index (June '03)
Most people can be trusted	37	25	-12*	News Interest Index (June '03)
Government is almost always wasteful	50	38	-12	News Interest Index (June '03)

Table 3 Continued

Question	Completed interviews	Terminated interviews	Diff.	Source
Society should accept homosexuality	50	39	-11	News Interest Index (June '03)
Discrimination keeps blacks from getting ahead	26	17	-9	News Interest Index (June '03)
Children will be better off than people now	38	45	+7	Social Trends (Feb. '06)
Business corporations make too much profit	54	59	+5	News Interest Index (June '03)
Gov't officials care about people like me	36	41	+5	News Interest Index (June '03)
I can make a great diff. solving comm. prob's	9	12	+3	Civic Engagement Survey
Approve of Bush's job as President	52	49	-3	Media Consumption Study
Poor have it easy b/c of gov't benefits	37	34	-3	News Interest Index (June '03)
People usually just look out for themselves	56	58	+2	Civic Engagement Survey
Satisfied w/ way things are going in the world	16	14	-2	America's Place in the World
Approve of Bush's job as President	44	45	+1	America's Place in the World
Islam is more violent than other religions	41	42	+1	News Interest Index (June '03)
Favorable opinion of the United Nations	53	53	0	America's Place in the World
Government should control gun ownership	57	57	0	News Interest Index (June '03)
Political Behavior				
Always vote in elections	48	38	-10	Civic Engagement Survey
Follow gov't and politics most of the time	42	33	-9*	Civic Engagement Survey
Ever participated in protest or march	18	11	-7	Civic Engagement Survey
Volunteered/community service in last 12 mon.	38	32	-6*	Civic Engagement Survey
Made political contribution in last 12 mon.	12	6	-6*	Civic Engagement Survey
Worked w/ others to solve prob. in last 12 mon.	22	19	-3	Civic Engagement Survey
News Consumption				
Following Dem. nomination very/fairly closely	50	37	-17*	News Interest Index (Jan. '04)
Read newspaper yesterday	46	33	-13*	Media Consumption Study
Listen to news on the radio regularly	51	44	-7*	Media Consumption Study
Getting most news from radio	15	8	-7*	News Interest Index (Jan. '04)
Getting most news from internet	13	6	-7*	News Interest Index (Jan. '04)
Watched TV news regularly	80	74	-6*	Media Consumption Study
Getting most news from newspapers	40	36	-4	News Interest Index (Jan. '04)
Getting most news from television	77	80	3	News Interest Index (Jan. '04)
Watch network TV news programs regularly	54	56	+2	Media Consumption Study

Figures based on unweighted data and recalculated with "don't know/refused" responses excluded

*Indicates means are significantly different at $p \leq .05$.

In terms of political attitudes, the differences between terminators and those who complete the survey are much more modest. The vast majority of attitudes examined showed no significant differences. On one item in the "Right to Die" survey, terminators were 24 percentage points less likely to say there are situations in which a terminally ill person should be allowed to die without every effort made to save them. In the June 2003 News Interest Index, the proportion of terminators believing that most people can be trusted was 12 percentage points lower than the figure for completes. In the same study, terminators were 15 percentage points less likely to say that immigrants strengthen the U.S. Otherwise, there were no statistically significant differences

between these two groups. This generalization covers a range of topics including presidential approval, personal happiness, satisfaction with community, family, health, and the like, and a range of social and political values and policies.

VI. Terminators and Item Nonresponse

One of the most striking and consistent differences between terminators and completed cases is the level of item nonresponse. Those who quit the survey have a higher propensity for giving “don’t know” responses and refusing to answer questions than those who complete. This pattern is likely attributable to two mechanisms. Terminators may legitimately not have opinions or know the answer to questions, in which case “don’t know” is a substantive response. Alternatively, terminators may be able to answer the questions but are unwilling to put forth the requisite cognitive effort, which means that they are satisficing (Krosnick 1991).

We find clear evidence for a greater propensity to give don’t know/refused among terminators, and this finding appears to be robust across survey topic. Table 4 presents the distribution of the DK/Refused Rate for terminators versus completes for four Pew surveys covering different topics. The DK/Refused Rate is simply the ratio of “don’t know/refused” responses given by the respondent to the total number of questions they were asked.¹ We constructed this measure in order to have a standardized comparison between terminators and completes. Almost by definition, the denominator of this rate is a very small number for many terminators, but the denominator is constant (and equal to the number of questions in the instrument) across the completes.

Table 4. Distribution of DK/Refused Rates among Terminators vs. Completes by Survey¹

<i>DK/Refused Rate</i>	America's Place in the World		Right to Die		Pew Social Trends: Oct. '05		Pew Social Trends: Feb. '06	
	<i>Term's</i>	<i>Completes</i>	<i>Term's</i>	<i>Completes</i>	<i>Term's</i>	<i>Completes</i>	<i>Term's</i>	<i>Completes</i>
0%-5% (<i>few DK/Ref's</i>)	41	52	60	66	85	92	69	91
6%-10%	14	26	12	22	6	6	11	6
11%-50%	30	21	21	12	7	2	17	3
51%-100% (<i>over 50% DK/Ref's</i>)	15	1	7	0	2	*	3	0
	100%	100%	100%	100%	100%	100%	100%	100%
Number of cases	(293)	(2,006)	(106)	(1,500)	(484)	(3,014)	(297)	(2,250)

¹The "DK/Refused Rate" is the proportion of all responses given by a respondent that were coded Don't know/Refused.

Many terminators only responded to one or two questions before quitting the interview.

In each of the surveys, terminators are significantly more likely to give don’t know/refused responses on many or most of the questions administered to them. For example, in the Right to Die survey, 7% of terminators gave don’t know/refused responses to more than half of the questions they answered, but none of the respondents who completed the interview had a rate that extreme.

Another pattern we observe in Table 4 is that the distribution of the DK/Refused Rate varied across the surveys. The shape of these distributions appears to be largely a function of

¹ Pew does not make a distinction between “don’t know” and “refused” responses. Interviewers code them into a single category during data collection.

survey topic. For example, the two Social Trends surveys feature questions about the respondent's own life that are relatively easy to answer, such as how many siblings they have and if they exercise regularly. The vast majority of both completed and terminated cases gave don't know/refused responses on only a small portion of all the questions they answered. We suspect that the DK/Refused Rate among terminators was somewhat higher in the February 2006 Social Trends survey because more questions on that survey were attitudinal rather than behavioral.

The America's Place in the World survey focuses almost exclusively on fairly complex questions concerning U.S. foreign policy, such as opinions about the European Union and the United Nations. These questions are farther removed from the daily happenings of the respondents' lives and it is likely that many respondents do not have pre-existing opinions on some items. Respondents without pre-existing opinions would then need to consider their beliefs and form an opinion on the spot or register a don't know/refused response. Not surprisingly, many opt for the latter. Approximately one-in-five (21%) completed cases in the America's Place in the World gave a don't know/refused response to over 10% of the questions in the survey, which is by far the highest rate observed for completions in this analysis.

The impact of survey topic on item nonresponse is similar for completions and terminators. In the America's Place in the World survey, fully 45% of terminators responded with don't know/refused to over 10% of the questions they answered; this compares to 22% of the completes. Similarly, in the Right to Die survey 28% of terminators had a DK/Refused Rate over 10% compared to 12% among completes.

VII. Impact of Terminations on Survey Estimates

We have observed that on some measures there is evidence that terminators are different from respondents completing the survey. This leads to the question of whether survey estimates would change if responses from the terminators were included. We address this question by comparing the survey estimates based only on the completed cases to simulated estimates based on both the completed and terminated cases. It is important to keep in mind that due to terminator attrition, it is only on roughly the first ten to twenty questions that the number of responding terminators is large enough to potentially shift the mean.

We tested all of the questions from Table 3 that showed a statistically significant difference between the mean for completes and the mean for terminators. The results are presented in Table 5. Despite the fact that several of these surveys had over 400 terminators, the impact of their nonresponse on the mean is negligible in most cases. Estimates of the proportion of the public who read a newspaper yesterday and the proportion with a high school education or less, shift by two percentage points when the responses from the terminators are included. All other questions analyzed here change by one percent or less.

Table 5. Simulated Estimates Based on Completed and Terminated Cases Compared to Estimates Based Only on Completes

Question	Estimates Based on Completes Only	Estimates Based on Completes + Terminators	Diff.	Source
	%	%		
Demographics				
High school education or less	41	42	+1	News Interest Index (June '03)
High school education or less	44	46	+2	Civic & Political Engagement Survey
Professional/business class	36	36	0	News Interest Index (June '03)
Age 65+	17	18	+1	News Interest Index (June '03)
Use the internet	90	90	0	Civic & Political Engagement Survey
Political/Social Attitudes				
Patients should sometimes be allowed to die	72	71	-1	Right to Die Survey
Most people can be trusted	36	35	-1	News Interest Index (June '03)
Immigrants strengthen the U.S.	47	47	0	News Interest Index (June '03)
Ban dangerous books from libraries	44	44	0	News Interest Index (June '03)
Political Behavior				
Follow gov't and political affairs most of the time	42	42	0	Civic & Political Engagement Survey
Volunteered/community service in last 12 mon.	38	37	-1	Civic & Political Engagement Survey
Made political contribution in last 12 mon.	12	12	0	Civic & Political Engagement Survey
News Consumption				
Read newspaper yesterday	46	44	-2	Media Consumption Study 2004
Listen to news on the radio regularly	51	50	-1	Media Consumption Study 2004
Watched TV news regularly	80	79	-1	Media Consumption Study 2004

Figures based on unweighted data.

Depending on the survey objectives, differences of this magnitude may or may not be of concern. If highly precise point estimates are desired and the measures are correlated with socioeconomic status, political engagement, or news consumption, then a one or two percentage point difference due to terminating cases may be unacceptable. As we have demonstrated, however, there appear to be only a limited number of domains on which terminators are systematically different from those who complete.

VIII. Conclusion: What Population, If Any, Do Terminators Represent?

Eliminating termination cases from RDD surveys would result in a modest improvement in response rates – approximately 2 to 4 percentage points in most of the surveys examined here. While the reduction of survey nonresponse overall is apt to involve a combination of many small steps such as reducing the incidence of terminations, these are clearly only a small part of the problem. And, as our analysis has shown, total survey estimates on most measures would be unaffected by the inclusion of the terminated cases in the completed sample.

Consequently, the value of this exercise depends on the extent to which terminators are a proxy for, or representative of, other nonresponding cases. At one extreme, terminators could simply be representative of a theoretical population composed of those who, after starting a survey on a given topic and with certain characteristics (length, sponsor, interviewer quality), would quit the interview and become nonrespondents. If the survey's respondents overall are representative of the population, then the terminators are representative of the approximately 7-15% who, if reached, would start but quit a given survey. If blending them into the sample (as we have simulated here) does not change the overall estimates, this gives us comfort that their absence from surveys in general is not producing a serious bias.

The validity of this conclusion, however, depends on the assumption that terminators are not proxies for a far more numerous group in the population. Indeed, at the other extreme, terminators could be representative of a much larger group of nonrespondents – many of whom are usually inaccessible to us and/or who refuse requests even to begin a survey. To the extent that this assumption is true, the implications of our findings are more problematic. In particular, they suggest that surveys may significantly overstate the extent of political interest and engagement, including the consumption of news. The picture is more mixed with respect to attitudes, where we do not find consistent or large differences between completed cases and terminators in the distribution of opinions on issues, parties, and candidates.

Validation data provide some insight as to the consequences of terminations for survey quality. Election results are an instructive example. As evidenced by the 2004 U.S. presidential election, national RDD polls continue to project election results with remarkable accuracy. The final Pew pre-election survey nearly exactly matched the election outcome (51% Bush, 48% Kerry). This is arguably an instance in which polls actually benefit from nonresponse given what we know about terminators. We found strong evidence that terminators are less engaged politically and, therefore, almost certainly less likely to vote (we did not have sufficient cases to test this directly). The exclusion of their responses may have actually improved estimates of vote preference. On the other hand, estimates of the level of political engagement and media consumption among the general population (as opposed to voters) are likely to be biased upward by their exclusion. Validation data from newspaper circulation and other news audience research suggest this is, indeed, the case (Prior 2005).

Benchmark data from large government surveys conducted by the U.S. Census Bureau indicate that terminators closely resemble the larger pool of survey nonresponders on key demographics (Keeter et al. 2000). For example, college graduates are typically overrepresented in unweighted RDD samples compared to national estimates from the Current Population Survey. As reported above, terminators tend to be less educated than respondents who complete, suggesting that they would be reasonable proxies for the rest of the nonresponding sample. Given current termination rates, however, it seems unlikely that preventing terminations alone would have a substantial effect on estimates.

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