



THE IMPACT OF SURVEY CONTEXT ON SELF-REPORTED RATES OF FRAUD VICTIMIZATION

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What’s Inside:

Summary.....	1
Intro & Background.....	2
Data & Methods.....	3
Results.....	5
Discussion.....	7
References.....	9
Appendix.....	10
Acknowledgments.....	11
About the Center.....	12

Summary

Using data from a survey of U.S. adults (n=3,000) ages 25 to 95, this study examines how survey context impacts reporting of personal financial fraud victimization. Prior evidence from other research domains suggests that the presentation, or context, of a survey can shape respondents’ understanding of their task and their interpretation of individual questions in the survey. The current study is designed to explicitly test if survey “context”—defined as the survey title, stated purpose, and a set of six prior items—has an effect on self-reporting of fraud victimization. The study uses an experimental design to compare self-reported fraud victimization among three different versions of a self-report survey. A basic fraud victimization survey was modified to present in three distinct contexts: as a crime survey; as a consumer buying experience survey; and as a neutral survey, which served as the control context.

Results show that exposure to the crime context is associated with decreased self-reporting of fraud victimization compared to those who received the control context. This inhibitory effect is particularly strong for individuals under the age of 35, over the age of 65, and for those with high self-perceived social status, but is reversed for respondents who are black. Exposure to the consumer context is not associated with a change in fraud reporting compared to those in the control context.

Though the precise mechanisms of the crime context effect remain unknown, this study suggests that survey context does have a statistically significant effect on fraud self-reporting. Further, this effect seems to have a differential impact based on demographic and behavioral characteristics. This research has practical implications for survey designers and researchers interested in understanding fraud victimization and susceptibility.

Introduction and Background

Each year, millions of Americans are the victims of personal financial fraud, resulting in annual losses estimated to reach \$50 billion.¹ While we know the problem is very large, different sources of data have yielded a wide range of estimates of fraud prevalence. Estimates of general past-year fraud victimization in the United States range from 4% to 16.5% of the adult population, with the most recent Federal Trade Commission survey of consumer financial fraud estimating that 10.8% of U.S. adults were victimized by one or more types of surveyed frauds in 2011.² Prevalence variability is due to a variety of factors, including different sample populations in terms of age and geography, different definitions of fraud, and different question wording. Another challenge for researchers measuring fraud prevalence is the high rate of victim self-report error. Studies of known victims have shown that many survey respondents fail to self-identify as victims when asked, with self-report error rates as high as 70% for certain types of fraud victims.³ This difficulty obtaining an accurate measure of financial fraud challenges researchers' and policymakers' ability to fully understand the problem.

Self-report surveys, in which participants are asked directly if they have been the victim of financial fraud, are among the primary sources of prevalence data regarding fraud victimization in the United States. Evidence from other research domains suggests that the survey context can influence how respondents interpret and respond to questions. A whole host of factors (including the survey title, the introductory text, and prior survey questions) may prime some experiences or provide a framework for interpreting later questions. Measuring the prevalence of rape with self-report surveys, for example, is known to be affected by survey question wording and hypothesized to be influenced by the general context of the survey and reputation of the surveying organization.⁴

With respect to fraud victimization, studies have shown that the type of question (e.g., direct versus indirect) and changes to survey wording affect self-reported rates of victimization.⁵ Yet, to our knowledge, no work has assessed whether, and to what extent, survey context affects reported rates of fraud victimization. The purpose of this study is to investigate whether self-reported rates of fraud victimization will vary among three surveys with identical fraud questions but with different survey contexts, as defined by the survey title, introductory text, and a set of six sensitizing questions. In this experimental study, a basic fraud victimization survey was modified to have the presentation of a crime survey in one context, the presentation of a consumer buying experience survey in another context, and remained neutral in a third context.

This study has two main research questions:

- 1) Does survey context affect self-reported rates of fraud victimization?
- 2) If so, are there any moderating factors that affect the relationship? In other words, are there any differences in the effect of survey context based on certain characteristics, like a person's age, gender, or race?

¹ Deevy et al. (2012).

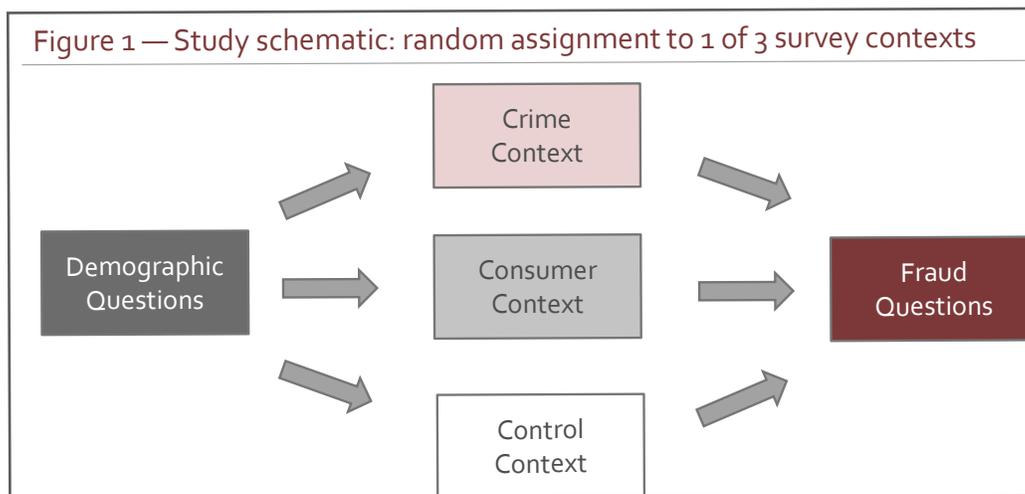
² AARP (2003); Holtfreter, Reisig, & Pratt (2008); Huff, Desilets, & Kane (2010); Anderson (2013).

³ Shadel & Pak, (2007); AARP Foundation (2011).

⁴ Fisher (2009); Tourangeau & McNeeley (2003).

⁵ e.g. FINRA Foundation (2013).

Data and Methods



Participants

Respondents were surveyed online and were drawn from an established online panel consisting of individuals who participate in surveys in exchange for incentives.⁶ The study consisted of 3,000 participants (ages 25 to 95) who were representative of the U.S. population with respect to gender, race, and income, but who were slightly better educated than the general population.

Contexts

All participants answered the same set of demographic questions and the same battery of questions about fraud victimization, but they were randomly assigned to one of three different survey “contexts” (Fig. 1). A few small changes to the survey title, survey introduction, and a set of sensitizing questions distinguished the three contexts.

In the crime context, the title of the survey was “Crime and Fraud in the United States” and the stated purpose of the survey was to help plan programs “to control crime and increase public safety.” Before answering the fraud questions, this group answered six questions about their recent

experience with crime, such as robbery, physical assault, and break-ins.

Those in the consumer purchasing context were shown the title “Consumer Buying Behavior and Fraud in the United States” and the stated purpose of the survey was “to shape future policies protecting U.S. consumers.” This group answered six questions about their recent experiences with various consumer scenarios, such as purchasing a product from a telemarketer or attending a free lunch seminar.

Those in the control (or neutral) group were shown the title “Fraud in the United States” and read that the purpose of the survey was “to shape future policies protecting Americans from fraud.” Those in the control context did not answer any sensitizing questions before the fraud battery. See the appendix for more information.

⁶ Nonprobability quota sampling was used to recruit a sample approximately reflecting the 2010 Census distribution for Census region, age, and ethnicity.

Fraud Victimization

To measure fraud victimization, all participants were asked if they had been victimized by 20 specific types of fraud, plus any other type of fraud not mentioned. Follow-up questions asked if the fraud was attempted or successful and if the fraud occurred in the past year. The specific fraud questions included several different types of personal investment fraud (e.g., oil & gas scams, penny stocks, Ponzi schemes, etc.), and what is commonly categorized as consumer fraud (e.g., business opportunity scams, advance fee fraud, weight loss fraud, work-at-home program scams, etc.) See the appendix for a full list of fraud types included in the survey. The introduction to the fraud questions included the following definition of fraud: “a misrepresentation or concealment of some fact relevant to a transaction of products or services with the intent to deceive for monetary gain.”⁷

For this study, fraud victimization was operationalized with a global measure of the percentage of participants who answered “yes” to at least one of any of the fraud questions. Analyses are limited to those who experienced successful (rather than attempted) fraud victimization in the past year.

Other Variables: The “Ladder” Question

In addition to basic demographic questions, the survey also included questions about several psychological and behavioral variables that might relate to context effects. One of these variables, subjective social status, has interesting results and deserves some explanation. Perceived or subjective social status reflects relative social standing with respect to respondents’ impression of their educational and/or socioeconomic background and their current circumstances. A slightly modified version of the MacArthur Scale of Subjective Social Status⁸ was used to measure perceived status.

Participants were asked to “Consider that the following ladder (10-point scale) represents the places that people occupy in society. Higher values on the ladder are the people who have more money, more education, and better jobs. Lower values on the ladder are the people who have less money, less education, and worse jobs (jobs with less recognition) or are unemployed. Where would you place yourself on this ladder?” Many fraud studies include objective measures of socioeconomic status, like income or education, but we were curious if the perception of social standing was also important.



“We’d like to ask you some questions about fraud. By fraud, we mean a misrepresentation or concealment of some fact relevant to a transaction of products or services with the intent to deceive for monetary gain.”

Ex) In the past year, have you been defrauded by someone who called you offering an investment opportunity?

Ex) In the past year, have you been defrauded by someone who told that you had won a prize or a lottery but first had to pay a fee?

⁷ Modified from Titus, Heinzlmann, & Boyle (1995).

⁸ MacArthur Scale of Subjective Social Status (1999).

Retrieved from <http://www.macses.ucsf.edu/research/psychosocial/usladder.php>

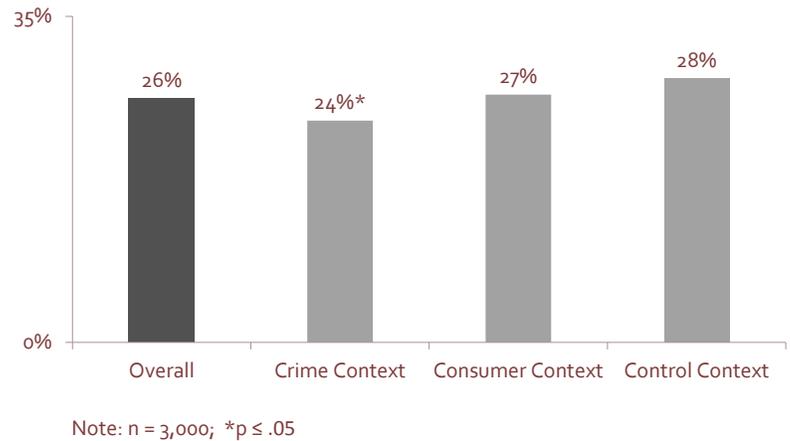
Results

Does survey context matter? Our descriptive results suggest it does. Those presented with the crime context report significantly less fraud victimization than those presented with the other two contexts (Fig. 2). Overall, we found a past-year victimization rate of 26%, meaning that 26%⁹ of the overall sample experienced some type of fraud victimization in the past year. But this victimization rate varies based on the survey context. Those exposed to the crime context report a victimization rate of 24%, which is significantly lower than the control context (28%) and the consumer context (27%), which are not significantly different from each other. It appears that the crime context inhibits reporting fraud victimization.

Interestingly, exposure to the crime context decreases reporting for both investment and consumer fraud (Fig. 3). It's reasonable to assume that the crime context inhibits reporting by causing respondents to restrict their definition of fraud to what they perceive as the most serious or "criminal" cases. Most would agree that investment fraud is a very serious offense, so one might assume that the effect of the crime context would be more pronounced with respect to consumer fraud, where there might be more room for interpretation. However, we found that the effect is actually greater for self-reporting investment fraud than for consumer fraud. Exposure to the crime context is associated with a four percentage point decrease in reporting consumer fraud victimization (20% in crime context versus 24% in control context), but there is a six percentage point difference between contexts when looking at investment fraud victimization (8% in crime versus 14% in control).

Figure 2 — Crime context is associated with decreased self-reported fraud victimization

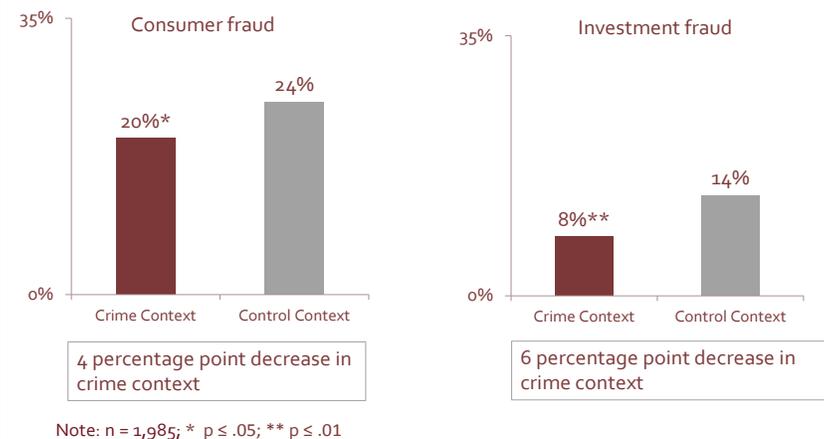
Percentage of respondents who reported any fraud victimization in the past year, by survey context



*“Does survey context matter?
Our results suggest it does.”*

Figure 3 — Exposure to the crime context decreases reporting for both broad fraud categories

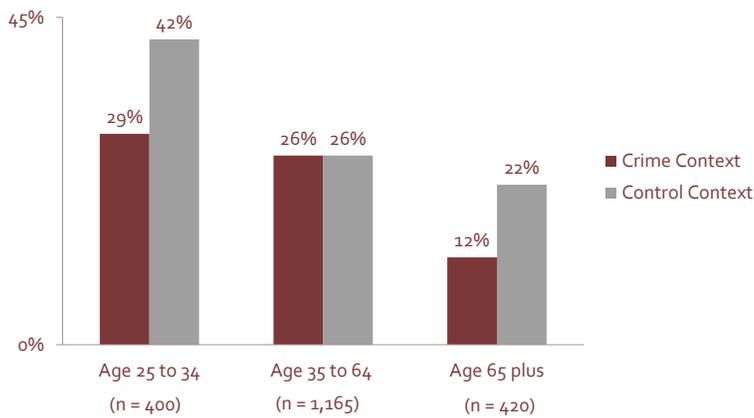
Past-year victimization by context and fraud category



⁹ Note: This victimization rate is higher than what is typically found in the literature, which may be attributable to the fact that we did not specify whether or not money had to be lost in the fraudulent transaction.

Figure 4 — The difference in self-reporting victimization by context is greater for young and older adults compared to middle aged adults

Probability of reporting fraud victimization in the past year, by age and context

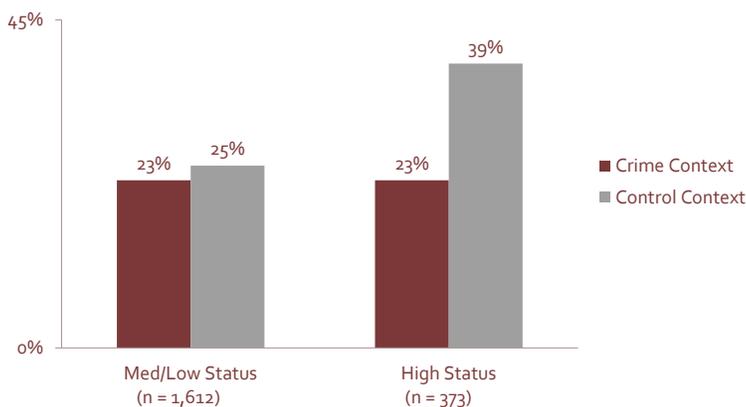


Note: Results from a logistic regression estimating the probability of reporting past-year victimization. The model included age, subjective social status, and race. The interaction between context and age is significant at the .05 alpha level.

“Are there any differences based on demographic or behavioral characteristics?”

Figure 5 — The difference in self-reporting victimization by context is greater for people with high subjective status

Probability of reporting fraud victimization in the past year, by subjective social status and context



Note: High status defined as self-rating 8 or higher on the 10-point scale of perceived status. Results from a logistic regression estimating the probability of reporting past-year victimization. The model included age, status, and race. The interaction between context and self-identified status is significant at the .01 alpha level.

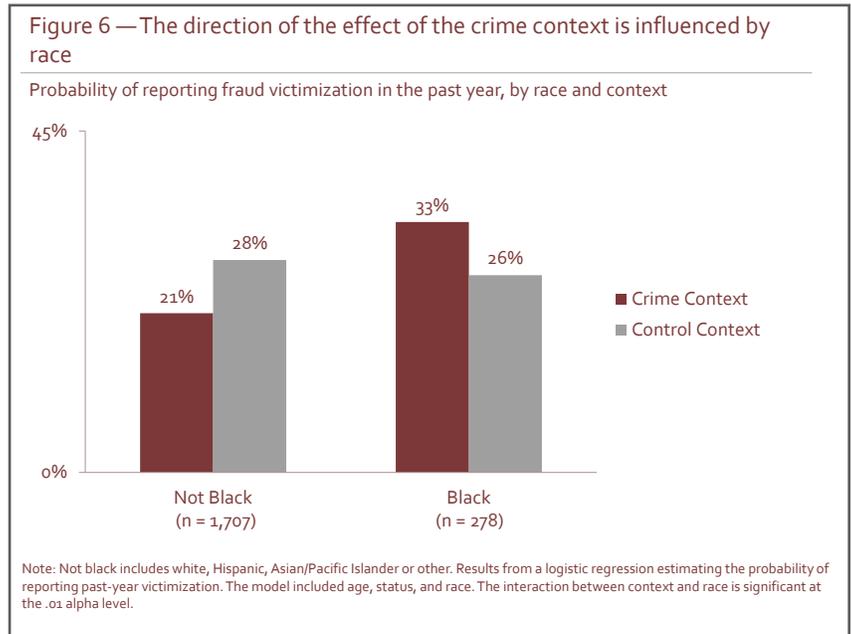
In addition to answering the basic question of if, and to what extent, survey context affects fraud self-reporting, we were also interested if any other variables affect this relationship. For example, are there any differences in the effect of the crime context based on certain demographic or behavioral characteristics, like a person’s age, gender, socio-economic status (objective and subjective), or race?

To answer this question, we created a regression model to predict the probability of reporting fraud victimization in the crime context and in the control context, taking into consideration several participant characteristics. We found that three factors influence the effect of the crime context on self-reported victimization rates: age, subjective social status, and race. For the sample overall, being in the crime context (versus the control) is associated with a five percentage point reduction in the probability of self-reporting victimization. However, the effect is greater for certain age groups (Fig. 4). For those ages 25 to 34, the young adults in our sample, the probability of self-reporting fraud victimization is 13 percentage points lower in the crime context than in the control context. Similarly, for those ages 65 and older, the probability of reporting fraud victimization is ten percentage points lower in the crime context than in the control. In contrast, there is no difference by context for those ages 35 to 64.

Even more pronounced, for those with high subjective social status¹⁰, the probability of reporting fraud victimization in the crime context is 16 percentage points lower than the probability of reporting victimization in the control context (Fig. 5). This suggests that those with high subjective social status, who represent 20% of the sample, are particularly susceptible to the inhibitory effect of the crime context.

¹⁰ Respondents were coded as “high-status” if they rated themselves an 8 or higher on the 10-point scale.

The effect of the crime context is also influenced by the race of the participant. The rate of criminal victimization in the United States is consistently higher among African Americans than among Caucasian or Hispanic individuals¹¹ and previous research has shown that certain dimensions of African American racial identity can influence how individuals interpret ambiguous situations.¹² We were therefore curious if the crime context would affect black respondents differently than other racial groups. Our results show that for respondents who are black, exposure to the crime context (versus the control context) is actually associated with an *increase* in self-reporting fraud victimization (Fig. 6). For black respondents, the probability of reporting past-year fraud victimization is seven percentage points higher in the crime context than in the control context. Conversely, for all other races, the crime context is associated with a seven percentage point decrease in the probability of reporting fraud.



“Age, subjective social status, and race influence the context effect.”

Discussion

This study suggests that the survey “context” (here defined as the survey title, introductory text, and prior questions) can affect self-reported fraud victimization rates in some cases. In our study, fraud victimization rates reported in the crime context are significantly lower than victimization rates obtained in the control context, but there are no differences between victimization rates in the consumer and control contexts.

Overall, exposure to the crime context is associated with a significant inhibitory effect on self-reporting fraud victimization. Moreover, this effect is stronger for young adults and older adults (compared to middle-aged adults), and those with high subjective social status. The effect of the crime context is also affected by race, such that the direction of the effect is reversed for those who are black. For this group,

being presented with the crime context does not inhibit self-reporting; in fact, it encourages reporting.

In general terms, we attribute our findings to the priming effect of the survey title, introductory text, and especially the six sensitizing questions about other serious crimes that the respondents answered before completing the fraud questions. Even though the fraud questions asked about specific types of fraud and the survey provided an explicit (albeit general) definition of fraud, our results suggest that many respondents in the crime context nonetheless may have restricted their personal definition of “fraud” to include only the most serious cases. Consciously or unconsciously, the prior items about crimes like burglary and assault may have provided a framework for interpreting later questions in the survey.

¹¹ Truman, Langton, & Planty (2013).

¹² Shelton & Sellers (2000).

Limitations

The precise mechanisms that underlie this crime context effect remain unknown. We do not know why the inhibitory effect is stronger at the ends of the age spectrum and for those with high subjective social status, or why the direction of the crime context effect is reversed for black respondents. The strength and direction of the priming effect is likely influenced by the emotional salience of the crime context, which could vary by group characteristics, but future research is necessary to fully explain these relationships. The data suggest that multiple mechanisms are likely at play. In addition, our results must be interpreted in light of the fact that our sample, though representative of a large cross-section of U.S. adults, was not a random sample of the population.¹³

Lastly, it is important to note that this study does not speak to which survey context yields more accurate victimization rates. Given the well-known phenomenon of under-reporting fraud victimization, some may assume that higher victimization rates are likely to more closely approximate the true rate of fraud victimization, but this is not always the case. Depending on the precise types of fraud under study, a more restricted definition of fraud may be appropriate. While future studies can offer information about the accuracy of victimization rates obtained from different contexts, this study illustrates the existence of statistically significant differences in our sample.

Implications

Even in the absence of well-understood mechanisms, these results have several practical implications for survey designers and researchers. This study provides empirical evidence that survey designers should consider how the context of a survey may influence self-reported rates of fraud victimization. This is especially important if there is a particular interest in comparison of victimization rates by age, race, or status, where our results suggest differential

context effects may be observed. For example, if researchers find racial differences in self-reported fraud victimization in a survey that contains several other questions about crime, our results indicate that at least some of the difference may be related to interaction between crime context and race rather than true differences in victimization. These results also provide further support for exercising extreme caution when comparing victimization rates across different surveys.

This study highlights the need for clearly defining the type of fraud that a survey intends to address. Even with an explicit definition of fraud and questions about specific types of schemes, our study provides evidence that respondents' interpretation of fraud is

“These results have several practical implications for survey designers and researchers.”

nonetheless influenced by context. It is reasonable to assume that context effects may be further magnified in surveys where respondents are asked to self-report through more general questions about fraud victimization. The most conservative approach is for researchers to ask a series of questions about specific experiences and make the judgment of fraud victimization on the basis of uniformly applied decision rules. This is the approach used by the Federal Trade Commission in the *Survey of Consumer Fraud in the United States*.¹⁴

Although fraud victimization is notoriously difficult to measure for a number of reasons, this study provides information about one piece of the larger puzzle that seeks to improve our understanding of the true scale of this problem.

¹³ Given the fact that individuals who agreed to participate in this study were part of a standing online panel, were offered financial remuneration, and responded exclusively on a computer with Internet access, the effect of context may vary as compared to a national sample.

¹⁴ Anderson (2004, 2007, 2013).

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Appendix

Fraud Types Included in the Survey:

Investment Fraud

- Cold Call Investment Scam
- Free Lunch Seminar Investment Scam
- Oil & Gas Scam
- Promissory Note Scam
- Pump & Dump Scam
- Pre-IPO Scam
- High-Yield Investment Program Scam
- Ponzi Scheme
- Digital Currency Purchase

Consumer Fraud

- Prize Promotion
- Unauthorized Billing
- Work-at-Home Program
- Debt Settlement
- Pyramid Scheme
- Mortgage Relief
- Advance Fee Loans
- Government Job Offers
- Grants
- Paid for Something Never Received
- Home Repair Fraud

Survey Instrument “Contexts”:

Crime Context

Survey Title: Crime and Fraud in the United States

Intro: We are conducting a national assessment of public attitudes toward and experience with crime. We would like you to complete a questionnaire as part of a nationally representative sample of Americans. The survey will take approximately 20 minutes to complete. Your answers are strictly confidential. Your participation is voluntary, but it would really help us in planning for programs to control crime and increase public safety.

[Crime Orienting Questions]

Now we’d like to ask you a few questions about some of the more common types of crime that happen to people. These questions refer only to things that happened to you, personally, within the last twelve months--that is since MONTH of last year.

1. In the last twelve months, did anyone rob you by using force or threatening to harm you?
2. Did anyone beat you up, attack you or hit you with something?
3. During the last 12 months, did anyone break into or somehow illegally get into your home?
4. Did anyone steal or use without permission any car, truck, motorcycle or other motor vehicle belonging to you?
5. Did anyone steal anything from any car, truck, motorcycle or other motor vehicle belonging to you such as the battery, tires, CD player, iPod, and so on?
6. Did anyone ever steal your identity to take money from your bank account, run charges on your credit card, or get medical treatment on your insurance?

Consumer Context

Survey Title: Consumer Buying Behavior and Fraud in the United States

Intro: We are conducting a national assessment of the consumer purchasing and investing experience. We would like you to complete a questionnaire as part of a nationally representative sample of Americans. The survey will take approximately 20 minutes to complete. Your answers are strictly confidential. Your participation is voluntary, but it would really help us to shape future policies protecting U.S. consumers.

[Consumer Orienting Questions]

First we'd like to ask you a few questions about some experiences you personally might have as a consumer and investor. These questions refer only to experiences within the last twelve months -- that is since MONTH of last year.

1. Have you, yourself, received a telemarketing phone call in the past year?
2. In the past YEAR, have you bought anything from a telemarketer who called you?
3. In the past YEAR, after seeing a television ad or infomercial, have you purchased anything from a seller with which you had not previously done business?
4. In the past year, did you make such contributions to a charity to which you had NOT previously donated?
5. In the past YEAR, after receiving an unsolicited commercial email or SPAM, have you purchased anything from a seller with which you had NOT previously done business?
6. In the past year, have you been invited to a meeting that offered a free meal and educational information about some sort of product or investment?

Control Context

Survey Title: Fraud in the United States

Intro: We are conducting a national assessment of fraud in the United States. We would like you to complete a questionnaire as part of a nationally representative sample of Americans. The survey will take approximately 20 minutes to complete. Your answers are strictly confidential. Your participation is voluntary, but it would really help us to shape future policies protecting Americans from fraud.

[No orienting questions]

Acknowledgments

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About the Center

The mission of the Stanford Center on Longevity is to redesign long life. The Center studies the nature and development of the human life span, looking for innovative ways to use science and technology to solve the problems of people over 50 in order to improve the well-being of people of all ages.

Working as a catalyst for change, the Center identifies challenges associated with increased life expectancy, supports scientific and technological research concerning those challenges, and coordinates efforts among researchers, policy makers, entrepreneurs, and the media to find effective solutions.

The Center was founded in 2006 by two of the world's leading authorities on longevity and aging. **Laura Carstensen** PhD, professor of psychology, is the founding director, and **Thomas Rando** MD, PhD, professor of neurology and neurological sciences, is deputy director. The Center received its initial funding from Richard Rainwater.

The Financial Security Division, directed by senior research scholar **Martha Deevy**, brings a unique interdisciplinary perspective to financial security issues facing our society by rethinking the perceived problems around an aging population, especially retirement planning and the need to work longer. By understanding the role that research, education, and policy can play in solving these issues and looking at the problems from multiple perspectives, the division drives the dialogue forward in order to facilitate a healthier state of long-term financial security for the individual and society.

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