

# **Evaluation of NORC's Cognitive Pretesting of New Items for the General Social Survey**

Jon A. Krosnick  
Stanford University

March 2008

This report was prepared at the request of the GSS Board of Overseers. Jon Krosnick is University Fellow at Resources for the Future. Address correspondence to Jon A. Krosnick, Stanford University, 432 McClatchy Hall, Stanford, California 94028, email: [krosnick@stanford.edu](mailto:krosnick@stanford.edu).

# **Evaluation of NORC's Cognitive Pretesting of New Items for the General Social Survey**

## Executive Summary

At the request of the GSS Board of Overseers, NORC conducted cognitive pretesting interviews to evaluate a set of new questions intended for the GSS, in August, 2007.

This memo reviews the Board's request, correspondence I had with NORC about the pretesting, and the conclusions I reached about the work product produced by NORC after listening to tape recordings of the interviews and comparing them to the written report that NORC submitted to the Board.

My conclusions include:

- 1) The pretesting was not designed according to best practices to gain the most information about question comprehension problems.
- 2) The pretesting was not implemented by the interviewer according to the best practices of cognitive pretesting.
- 3) Audio recording of the interviews was not done properly, so much of the information gained from the interviews was lost.
- 4) The NORC report failed to mention most of the useful information gained from the interviews that were conducted about questions comprehension problems.
- 5) Some of the questions being tested were shown to have significant comprehension problems and would need improvement and additional testing before they should be included in the GSS.
- 6) Despite the suboptimal implementation of this exercise, it demonstrates the value of conducting optimal cognitive pretesting of GSS questions in the future.

## **Evaluation of NORC's Cognitive Pretesting of New Items for the General Social Survey**

### Introduction

In August, 2007, NORC conducted cognitive pretesting interviews to evaluate a set of new questions intended for the GSS.

This effort was implemented at the request of the GSS Board of Overseers. The Board believes that cognitive pretesting has become standard practice for gold standard surveys and is a valuable way to identify problems with question wording and respondent comprehension prior to including a question in a production survey.

This memo reviews the Board's request, correspondence I had with NORC about the pretesting, and the conclusions I reached about the work product produced by NORC after listening to tape recordings of the interviews and comparing them to the written report that NORC submitted to the Board.

### The Board's Request

Minutes from the Spring 2007 Board meeting say the following about its discussion of cognitive pretesting:

---

#### **21. Cognitive interviewing**

Krosnick reviewed that Lempert, a representative from NSF, was surprised that the GSS does not conduct cognitive pre-testing for new questions. Krosnick continued that the Board was interested in using cognitive interviewing in pretests. The idea of cognitive pre-testing, Krosnick continued, is to ask a respondent to repeat back the question as they understood it; respondents are also encouraged to think out loud as they formulate their answer. Krosnick said that if one of a group of 15-20 respondents has difficulty with a question, then there may be a problem with a question.

Next, the group discussed some issues associated with cognitive pre-testing. Manza asked about the cost of pretesting; Smith replied that cognitive pre-testing doubles costs. Smith noted that module funders would have to provide the items earlier than they usually do in order to meet the summer pretest schedule. This raises questions, Smith continued, about whether to pretest modules that have a

low probability of being funded. Krosnick wondered about the appropriate action if an item that has been fielded on previous surveys performs poorly on the cognitive pretest. Similarly, Desipio asked whether the modules that were being replicated should be pre-tested. Mare said that these items should be pre-tested, even if no action to change the items will be taken in 2008. Finally, Smith raised the issue of how the Board and PIs should weigh the results of cognitive pre-tests relative to existing quantitative evidence about the validity of a particular question.

Mare said that the Board is willing to pay for cognitive pre-testing of some items as a demonstration project. Mare continued that the Board would ask module funders to address any concerns raised by the cognitive pre-testing. Smith said that the module funders may not be receptive to changing questions based on a cognitive pre-test. Smith continued that, given the schedule, there is not enough time to create a new question; there is only time to tinker with an existing question.

The group discussed which questions should be cognitively pre-tested for the 2008 survey. Bianchi suggested the panel module items, in addition to some former GSS items. To summarize, Mare said that the panel module questions, the citizenship question, and several other questions (possibly sexual orientation and a subset of the science items) would be cognitively pre-tested. Smith informed the group that he needed to receive the items by 6/1.

---

### My Correspondence with Tom Smith

Subsequent to this meeting, I corresponded with Tom Smith by email about the cognitive pretesting on behalf of the Board. I reiterated the request from the Board, identified the items to be pretested, and reminded him that I was asked to work with NORC to optimize the conduct of the data collection and interpretation. Tom later emailed to say that he had told the NORC pretesting staff of my interest in helping them. I also sent Tom a report of cognitive pretesting results that I had written for a different project, to provide guidance to NORC on how the Board would like to see NORC's report look (my report is shown in Appendix C of this document).

I heard nothing further from NORC about the cognitive pretesting and therefore did not end up playing any role in the design or execution of the process. I only saw NORC's written report after the work had been completed.

At that time, with the Board's support, I asked NORC to listen to the audio recordings of the interviews to evaluate how they were done and to ascertain whether any lessons were learned other than those mentioned in the NORC report. The comments that follow are based on observations gleaned from reading their report and listening to the tapes.

### Ideal Cognitive Pretesting

The goal of cognitive pretesting is to see how people interpret the intended meanings of questions and to identify any questions that are difficult to interpret or that can be interpreted in ways different from what the researcher intends. As mentioned in the above summary of the Board's discussion, the most common implementation of cognitive pretesting involves two primary exercises (see Appendix A, which describes a set of guidelines I wrote for optimal cognitive pretesting): (1) having respondents restate each question in their own words, not using any words in the original question, and (2) having respondents think aloud when they generate their answers to a question. These techniques have been shown to identify respondent misunderstandings and thereby point researchers to aspects of question wording in need of repair.

Cognitive pretesting is rarely, if ever, done with respondents resembling a representative sample of a population. Rather, advertisements usually solicit people who are interested in participating in interviews lasting one to two hours and are paid generously for their time (as much as \$75 or \$100). Although respondents are often asked to complete the procedure in a lab (necessitating recruitment of people who are in a small geographic region and often people who have done cognitive pretesting for the organization in the past), it is possible to achieve more geographic diversity by advertising nationally and conducting the interviews by telephone (visual aids can be mailed to respondents prior to such interviews).

When analyzing the results of cognitive pretesting interviews, researchers normally do not try to anticipate the distributions of answers to questions that would be obtained from a representative sample, nor do analysts assess whether many respondents react similarly to a question. Rather, if even a single respondent says something to suggest that a question can legitimately be interpreted in a way different from that which the researcher intends, this usually merits repair efforts. Of course, if more than one respondent reveals the same misunderstanding, then researcher motivation would be even greater. But it would be a mistake to conclude that a revealed problem with a question does not merit repair simply because only one pretest respondent identified it – usually, cognitive pretesting samples are so small and so haphazard that any such quantitative analysis is without merit. Thus, the data should be interpreted qualitatively.

### How NORC Did the Cognitive Pretesting

The NORC cognitive pretesting did involve recruiting people from the region around NORC, though the exact method of distributing the recruitment announcement is not made clear by the report. It is also not clear how many, if any, of the participants had experience doing cognitive pretesting for NORC previously.<sup>1</sup>

---

<sup>1</sup> If some respondents did have prior experience with cognitive pretesting, it might make them more like “professional” survey respondents who are no longer representative of less practiced people at interpreting

The recordings I was given reveal that the interviewer handled herself professionally and was polite and pleasant with the respondents. And for the most part, she read the interviewing script fairly closely to the way it was written.

However, the 2007 GSS cognitive pretesting was not designed to implement best practices regarding this methodology. In fact, respondents were never asked to restate the questions in their own words. And the respondents were never asked to think aloud while generating their answers. Thus, no direct efforts were made to measure respondents' question interpretations.

Instead, the following procedures were implemented:

- 1) For some questions, respondents were asked whether the meaning of a question was clear to them or not. But this was done for only a small subset of the questions.
- 2) For a small minority of the questions, respondents were asked what would have made a question "a better question."
- 3) On a couple of occasions, a respondent was asked how he/she defined a single word or phrase in a question (e.g., "the word "leader" or "acknowledged couple").
- 4) On a couple of occasions, a respondent was asked what he/she thought of when he/she heard a particular word or phrase (e.g., "erosion").
- 5) When a diagram was presented with a question, respondents were sometimes asked whether the diagram was "helpful in answering this question."
- 6) Sometimes, respondents were asked to describe how easy or difficult it was to answer a question.
- 7) Sometimes, respondents were asked how sure they were of their answer to a question.
- 8) Sometimes, respondents were asked whether the set of answer choices offered was "adequate for you to answer this question accurately."
- 9) For the battery of questions on citizenship, some respondents were asked, "Do you feel that these questions adequately address your citizenship situation?"
- 10) Many questions were asked without any follow-ups or probes being implemented. Respondents simply answered the questions without providing

---

the intended meanings of survey questions. This could cause failure to identify problems with question wordings.

any information to reveal whether they were understood properly.

### Critique of the Design of the NORC Procedure

The above approach is not ideal for cognitive pretesting and does not conform to standard practice in the area, for a variety of reasons. For example, ideal procedures would evaluate interpretations of all questions, not just some. Ideal procedures would seek to determine how respondents interpret the questions, whereas this was rarely done here.

Ideal procedures would not ask respondents to suggest ways to improve a question. This approach tries to put the respondents in the role of question critic and question rewriter, roles that respondents are not trained or equipped to perform. Evaluating the clarity and effectiveness of a question and rewriting a question to enhance clarity require expertise in these complex skills and also require knowledge of the intended purpose of each question. Respondents did not have this expertise or knowledge, so they were not in a position to be effective critics or rewriters.

Ideal procedures would not rely on respondents to state whether the meaning of a question is clear to them. Even if a respondent believes that a question's meaning is clear, the meaning he/she believes the question has may not be the intended meaning of the question writer. But the way these interviews were conducted, when respondents said they believed a question's meaning was clear, they were not asked to articulate that meaning. Thus, it is impossible to know whether the perceived meaning matches the intended meaning.

Ideal procedures would not involve asking respondents whether presented diagrams were helpful in answering the questions. In most such questions tested here, the diagrams were essential, because they stated the question that respondents needed to answer. To ask whether the diagram was helpful is to ask whether knowing what the question is asking is helpful, whereas obviously knowing what the question is asking is essential for a respondent.

Ideal procedures might include asking respondents how difficult it was to answer a question and how sure they were of their answers, because ambiguously phrased questions might yield difficulty and uncertainty. But difficulty and uncertainty can also occur when a respondent understands a question perfectly and easily but has difficulty choosing an answer (e.g., because he/she does not know how a fish gets oxygen). Therefore, in any instances when a respondent describes difficulty or uncertainty, it would be essential to probe to determine whether it is due to ambiguity in the question or to some other source. This sort of clarification probing was not done.

Ideal procedures entail recruiting respondents who (1) are equipped to answer all the questions to be tested, and (2) are most likely to have comprehension difficulties. In this study, meeting the first of these criteria would entail recruiting people who were not US citizens and recruiting people who had experiences unwanted romantic advances.

But neither of these criteria appear to have been used for recruiting, and as a result, this study could not in fact evaluate the clarity of the questions on these topics, because they could not be asked of the respondents. Second, it appears that no quotas were used when recruiting respondents to over-sample people likely to have comprehension difficulties. As a result, most of the respondents appeared to be quite facile at answering the science questions. Thus, the procedure is likely to have understated the extent of potential understanding problems that would be encountered in the production implementation of the GSS.

### Critique of the Implementation of the NORC Procedure by the Interviewer

The interviewer did not strictly follow a script in administering the cognitive interviews. Instead, she often improvised instructions and comments throughout and sometimes reworded questions. This is suboptimal, because in order to ascertain whether questions were understood properly, it is important to read them identically as scripted for all respondents. Some of the rewording that the interviewer did of the questions increased their clarity and thereby reduced the likelihood that respondents would point out suboptimal wording.

The interviewer introduced the task by telling respondents that she was testing new questions that might be added to the General Social Survey and that she was not especially interested in the respondents' answers to the question but rather was interested in whether the respondent thought the meanings of the questions were clear. Although the latter is quite true, telling respondents that the interviewer is not interested in their answers to the questions seems unwise and seems likely to reduce respondent motivation to provide careful answers.

The interviewer's pace was quick, and she quickly said "ok" and thus discouraged discussion as soon as the respondent completed one sentence in response to a question. Routinely, the interviewer interrupted the respondent when he/she was speaking, and there were many occasions when both the interviewer and respondent were speaking at the same time, making the recording unintelligible and discouraging the respondent from providing commentary.

At the start of the interviews, the interviewer took ownership of the questionnaire by saying that NORC had written the questions and was testing them for future use. This turns out to have made at least one respondent reluctant to criticize the questions, because she thought she would be criticizing the work of the interviewer. Only once the respondent confirmed that the interviewer did not write the questions was she willing to criticize them. It is quite possible that other respondents were reluctant to criticize the questions for the same reason.

The interviewer often rephrased the respondent's answers to questions and thus put words in his/her mouth and shaped the way he/she talked and thought. This is suboptimal.

The interviewer sometimes preceded a question by saying “This next one is a tricky one,” thus biasing the respondent’s perception of the question unnecessarily.

In the Panel Module question section, there were no pre-written probes to check respondent understanding of the questions. The interviewer occasionally improvised a follow-up probe question but did not do so for most questions and got only very brief, superficial answers.

When reading the questions in the Panel Module, the interviewer read each answer choice preceded by the letter that appeared before it on the page (e.g., “Generally do today’s immigrants work a, harder, b, not as hard, or c, no different than people born here.” I assume that GSS interviewers would not read these letters aloud before the answer choices in the real GSS, and this non-comparability in some cases may have changed the apparent interpretation of the question and answer choices and certainly made hearing the answer choices more cognitively demanding than would have been the case if the words had been read without the preceding letters.

Near the beginning of one of the interviews, when the respondent said a question was clear, the interviewer said “Great. That’s the kind of answer we like.” Then she corrected herself by saying “I shouldn’t say that. If there’s a problem with a question, we want to know it.” Unfortunately, a great deal of research in psychology suggests that later discrediting of a revealed fact is rarely effective at accomplishing the goal. For example, when a judge instructs a jury to ignore the spontaneous outburst by the defendant in the courtroom, jurors are unable to disregard it. And false feedback given to experimental participants in laboratory experiment is rarely fully discredited by debriefing at the end of the interaction. Therefore, the interviewer’s attempt to discredit her initial statement is not likely to have been effective – the respondent is likely to have understood that she preferred not to get critical feedback on the questions, thus discouraging comments during the remainder of the interview.

After the first few interviews, the interviewer learned that GRNPRICE in the Panel Module was confusing to respondents in an open-ended form, since respondents expected to be given answer choices. During subsequent interviews, the interviewer inserted at the end of the question a sentence such as, “You can answer however you like.” Thus, a defect in the question was corrected in practice, and this correction was not documented in the NORC report.

### Shortcomings of the Process of Evaluating the Interview Results

Although the report says that 12 respondents were interviewed, I was given recordings of only 9 respondents. So I could not evaluate the interviews conducted with the remaining 3 respondents. Furthermore, more than half of the recordings I was given disintegrated midway through the interview, so I did not hear a portion of these interviews and cannot evaluate how they were conducted or what was learned.

The complete interviews that I heard lasted about 20-25 minutes, and respondents were only asked a subset of the questions in the appendix to the report from NORC. Since the advertisement soliciting participants promised \$75 for 60 minutes, it is puzzling why the interviewer did not ask each respondent to answer all the questions in the packet. This seems like a waste of resources and squandering an opportunity to learn more information.

None of the recordings I heard included anyone who was not a US citizen answering the full array of questions about citizenship. All the respondents answered just one or two questions at the beginning of the battery and none of the rest. Therefore, it would be inappropriate to say that these questions had been subjected to cognitive pretesting.

Most of the questions about sexual harassment are only to be asked of people who had been the recipient of sexual advances. None of the respondents whose recordings I heard reported that they had been a recipient of such advances, so they were not asked most of these questions. Therefore, it would be inappropriate to say that these questions had been evaluated in this pretesting exercise.

In the recordings I heard, no respondents were asked to answer the gay/lesbian/bisexual experiences or on employment and health insurance, so I cannot evaluate how these questions were subjected to testing.

The writing of the report appears not to have taken advantage of another stream of information collected during the interviews, what might be called verbal and non-verbal metadata that might reveal question problems. Behavior coding is one well-established method of question pretesting that was pioneered by Charlie Cannell of the University of Michigan. Cannell recommended that various specific verbal and non-verbal behaviors by respondents be treated as indicators of potential problems with the wording of a question. For example, if respondents request that a question be reread before they answer it, that is an indication that it was too difficult to understand or remember in its stated form. And if a respondent pauses a long time after hearing a question before beginning to answer, that might indicate comprehension problems. The NORC report did not make note of instances of such behaviors that might indicate question problems.

### Specific Problems with Implementation and the Questions

In this section, I provide observations based upon my listening to the recordings of the interviews. These observations are sometimes of inadequacies in the implementation and sometimes inadequacies in the NORC report and sometimes inadequacies in the questions being tested.

Respondent 1. On one occasion, the interviewer asked the respondent to explain his/her thinking in coming to an answer, and the respondent was not immediately able to

articulate his/her rationale. The interviewer did not calmly wait for him/her to generate an explanation and instead quickly moved on and said “That’s ok,” thereby foregoing collecting this information.

While reading the questions, the interviewer sometimes critiqued the question wording in *soto voce* in the middle of reading it by inserting a sentence of her own quietly.

At one point, the respondent’s cell phone rang, and it took a while for him/her to turn it off. This occurred after the interviewer had read a lot of a long question but had not finished reading it. At that time, the interviewer did not restart by reading the question from the beginning but simply picked up continuing from where she left off. The respondent then had to ask the interviewer to reread the question since he had forgotten it.

The interviewer and respondent laughed together and briefly celebrated when they completed the first set of questions. This might have suggested that the interviewer was interested in completing the interview as quickly as possible.

When asked CA1 in the Unwanted Advances section, the respondent first asked “At work?”, thus indicating an ambiguity in the question wording. Although the question begins by mentioning the work setting, the end of the question does not restate that setting, so it is not clear whether the question seeks to know about advances that may have been experienced in any setting or just at work. But the NORC report did not mention this.

Respondent 2. When the respondent was asked the first question in Science Form 2 about what property of water is most important, she listed some other properties not offered among the response choices, and in doing so, suggested that the concept of “most important” was not clear in the question. This same theme was raised by multiple other respondents – that they did not know what the intended definition of “most important” in the question was. In the NORC report, this was mentioned in one brief and cryptic sentence: “Some questions the use of the term “most important” in question 1.” But this was not explained in a way useful for directing rewriting of the question.

The respondent said Question 16 in the second set of science questions was difficult. But the interviewer did not ask the respondent why this question was unclear, even though the questionnaire instructed the interviewer to ask this.

As with Respondent 1, when asked CA1 in the Unwanted Advances section, this respondent first asked “At work?”, thus indicating an ambiguity in the question wording. The interviewer then said “I believe at work, yes,” thus changing how the respondent understood the wording of the question. But the NORC report did not mention this.

Respondent 3. This respondent was very quick at understanding science, so it's unlikely that he was informative about what would happen for people with less literacy.

The respondent said that response choices A and B for question 9 in the science section were almost the same in meaning, so he could not choose between them. This was mentioned in the NORC report.

The respondent indicated that Question 14 in the science section was confusing because he didn't know what was being tested. This required rereading and clarifying the intent of the question by the interviewer. After that clarification had been provided, the respondent said the question was not difficult to understand. No mention was made of this problem with the question in the NORC report.

This recording stopped midway through the interview, so I couldn't tell what other questions were asked.

Respondent 3. The respondent required that the first Panel Module question GRNLAWS be repeated for it to be understood, but no mention of this as made in the NORC report.

Question 2 in the Panel Module GRNPRICE was asked as an open-ended question: "How willing would you be to pay much higher prices in order to protect the environment?" The respondent was confused about whether the question was a yes/no question or how else he/she could answer. The interviewer clarified that the question could be answered however the respondent liked. This confusion was mentioned in the NORC report.

IMMEFF in the Panel Module section also required that the question be repeated for the respondent, since he was unsure of its meaning initially. But this was not mentioned in the NORC report.

My recording of this interview disintegrated midway through, so I did not hear all of the conversation that took place.

Respondent 4. The respondent said that Question 1 in Science Form 2 was clear, and yet he immediately gave an incorrect answer by selecting the first response option offered. This merited probing to explore why the respondent chose this answer, but such probing was not done.

Question 8 in Science Form 2, the respondent indicated that the answer choices did not include the answer that he wanted to give: DNA. He said the question was difficult to answer. But this was not mentioned in the NORC report.

The interviewer repeated Question 13 in Science Form 2 to help the respondent understand it, but this was not noted in the NORC report. The respondent said he was not sure of his answer and he chose an incorrect answer. He said it was completely a guess.

Then he said “that was a little difficult for me.” But this was not probed further by the interviewer.

This person clearly was not an expert on scientific issues and would have been very helpful to determine how such a person interpreted the questions, but no information was collected on his question interpretations.

For Question 15 in Science Form 2, the respondent answered incorrectly and said it was a little difficult to formulate an answer. When he spoke about the question, it was clear that he did not understand it, but no mention was made of this in the NORC report.

Question 2 in the Panel Module was asked open-ended “How willing would you be to pay much higher prices in order to protect the environment?”, and the respondent answered “sort of half”, which makes no sense and indicates a problem with the open-ended framing. But this was not mentioned in the NORC report.

This recording disintegrated midway through, so I was not able to hear most of the interview.

Respondent 5. When answering the Science Form 1 questions, this respondent answered most of these questions quickly and said essentially nothing in response to the follow-up probes.

She was highly knowledgeable about science so did not reveal much about misunderstandings that could occur among less knowledgeable respondents.

She expressed uncertainty about what the Question 14 was asking, and she said it was confusing. She answered one way confidently, and then when asked a follow-up question, she realized that she had misinterpreted the question and changed her answer. But no mention was made of this in the NORC report.

When answering the Panel Module questions, she answered very quickly and said essentially nothing in response to the follow-ups. After answering a question, though, she sometimes asked the interviewer to return to the prior question so she could make a comment about it. This suggested that the interviewer was moving too fast for the respondent to be able to articulate her thoughts about the questions. But no mention was made of these comments in the NORC report.

In response to Panel Module Question 4, she said that another response option should be added to allow people to support “a combination of payers for Medicare” instead of forcing respondents to select only “you and your family”, “government” your employer”, or “private charity”. Other respondents made the same suggestion, but this was not mentioned in the NORC report.

In response to Panel Module Question 6, she said that response option C was not optimal, because it suggested that people would not have any effect, whereas she wanted

to say that immigrants would have an effect but would not necessarily make things better or worse (which were the only other response options offered). This was not mentioned in the NORC report.

The recording of this interview disintegrated midway through, so I was not able to hear most of the interview.

Respondent 6. The respondent answered the Science Form 2 Question 1 quickly with answer D, but he indicated that he would rather have been given an answer choice indicating that water contains oxygen.

This respondent spontaneously justified many of his answers in articulate ways that made it clear he understood the questions. Thus, the respondents revealed his interpretations, even though he hadn't been asked to do so. He was the only respondent who did this.

When answering the Panel Module Question 4, this respondent said the cost should be shared among some of the payers listed, but this was not an option offered by the question. This was not mentioned in the NORC report.

The recording of this interview disintegrated mid-way through, so I was not able to hear most of it.

Respondent 7. When answering Science Form 1 Question 6, this respondent revealed a fascinating misunderstanding. She said that everyone knows that ocean water can't be used on land. The issue, she said, is whether ocean water can be converted into usable water. She said that the question wasn't clear about whether the test was trying to determine whether the respondent thought ocean water could be desalinated and therefore made usable on a farm. This is presumably not the purpose of the question, and if respondents interpret it this way, it can lead to mismeasurement of scientific understanding. This was not mentioned in the report and strikes me as a critical problem with the question.

The interviewer had to repeat Science Question 7 in order for the respondent to answer. But this was not mentioned in the report. The respondent said she was torn between choosing C and D and ended up choosing C. The interviewer said that the correct answer is D. The respondent said she was thrown off by this question "because it is a fine line between what is bad erosion and what the erosion is that we don't have a control over because it's in nature." The respondent said the question would be improved by adding the word "natural" to the question, as in "which is NOT an example of natural erosion." This was not mentioned in the NORC report – it did say that some respondents thought the question was not clear, but it did not describe the additional information collected that revealed the source of the lack of clarity.

When answering Science Question 3, the respondent said that by the time she heard all the answer choices, she had forgotten what the question was. She felt the

question and answer choices were cognitively overwhelming. She said words like “friction” were complex words. So she said it would be clearer if the question were less cognitively burdensome. She suggested that making the question a little longer with a few more words would make its meaning clearer and would make it easier to answer. This was not mentioned in the NORC report.

Q5. She said she was lost on the chemistry in the question. That may have meant that she could not follow the information in the question. She said the question was clear “if you knew the answer”, but she said she did not know the answer for sure. The interviewer asked the respondent what could make the question better, and she said she did not understand that question. This was not mentioned in the NORC report.

Q14. R made it clear that she had to reread the question text in order to understand the question (it was on paper for her to reread). This was not mentioned in the report.

R was reluctant to criticize Question 14 until she confirmed that the interviewer had not written the test. When she had confirmed that, she said the pictures are not necessary and in fact were distracting and made the question more difficult. She said the words alone would have been simpler and earlier to understand.

The respondent needed Panel Module Q1 to be repeated in order to understand it, a sign of comprehension difficulty.

Panel Module Q2. The question asked whether the respondent would be willing to pay higher prices, but R answered in terms of whether she’d be willing to pay higher taxes. This misunderstanding was not mentioned in the NORC report.

Panel Module Q3. The respondent wanted a response option between extremely dangerous and somewhat dangerous – she perceived them to be too far apart to allow her to answer accurately. This observation is supported by a great deal of questionnaire design research but was not mentioned in the NORC report.

Panel Module Q4. The respondent wanted to say a combination of government plus people and their families, but this choice was not offered by the question, nor was this request mentioned in the NORC report.

Panel Module Q5. The respondent thought that stem cells come from placentas, but this misunderstanding was not pointed out in the NORC report.

Panel Module Q6. The respondent wanted another response option to allow her to say that some people make it better and others make it worse, but this was not mentioned in the NORC report.

Panel Module Q9. The respondent wanted another response option to say that priority should not be based on either family or abilities, but this was not mentioned in

the NORC report.

Panel Module Q10. She said that “a great deal” and “somewhat” are too far apart – she wanted another response option between them. Again, this recommendation is consistent with a large literature in questionnaire design but was not mentioned in the NORC report.

Panel Module Q12-16. The respondent said she couldn’t remember the response options without reading them. This indication of comprehension difficulty was not mentioned in the NORC report.

The respondent wanted a response option between friendly and unfriendly for China, but this was not mentioned in the NORC report.

Panel Module Q23. The respondent said she has been unable to work because of illness, but that she’s retired as a result of the illness, not temporarily unable to work. And it’s not clear whether she should answer yes or no. This was not mentioned in the NORC report.

Panel Module Q24. R said she was interested in part time work but was not actively seeking part time work, and she wasn’t sure how to answer. This was not mentioned in the NORC report.

This recording was interrupted many times, so I missed out on some things the respondent said.

Panel Module Q25. The respondent misinterpreted the question as asking whether she had trouble paying bills. This was not mentioned in the NORC report.

In the sexual advances questions, the respondent needed to have the initial question reread to her before she could answer it. This comprehension difficulty was not mentioned in the NORC report.

The recording of the interview disintegrated midway through, so I could not hear the end of it.

Respondent 8. Science Form 2. The respondent said essentially nothing in response to the interviewer’s scripted follow-ups. Little was learned from him.

Science Q12. The respondent said it was moderately difficult because the question was long. This was not mentioned in the NORC report.

Panel Module Q1. The respondent said he did not like this question being a yes/no question and wanted the opportunity to express his preference about the amount of government regulation. This was mentioned in the NORC report.

Panel Module Q3. The respondent asked for the response options to be read a second time before answering. And the respondent said he didn't know enough about the topic to have an opinion and would like to have a DK option. This was not mentioned in the report.

Panel Module Q4. The respondent said he did not have a firm opinion, but the question assumed that he had an opinion. This was not mentioned in the NORC report.

Panel Module Q6. The respondent hesitated for a long time because he felt there would be pros and cons but was not given this response option. This was not mentioned in the report.

The recording of this interview disintegrated midway through, so I could not hear a lot of it.

Respondent 9. Science Form 1 Q7. The respondent did not know whether the right answer was B or D. He said he doesn't know the geological definition, so he wasn't sure whether B would be appropriate. He seemed very articulate and knowledgeable, so this seemed like a person thinking carefully about an ambiguous question. He answered all of the other questions correctly easily. He was not a good person to identify comprehension problems that might occur for people not expert about science.

Science Q3. The respondent pointed out that the engine has to be stronger than friction, so C has to be correct in addition to A. He's right about that. This was not mentioned in the NORC report.

This recording was interrupted midway through, so I could not hear the rest of it.

### Conclusions

From this review, I have reached the following conclusions:

- 7) The GSS Board paid a considerable amount of money to have NORC conduct cognitive pretesting according to best practices.
- 8) I reached out to NORC to offer to help them to conduct this process optimally.
- 9) NORC declined to accept my offer to help.
- 10) The pretesting was not designed according to best practices to gain the most information about question comprehension.
- 11) The pretesting was not implemented by the interviewer according to the best practices of cognitive pretesting.

- 12) Audio recording of the interviews was not done properly, so some and perhaps much of the information gained from the interviews was lost.
- 13) The NORC report failed to mention most of the useful information gained from the interviews that were conducted and recorded.
- 14) Some of the questions being tested were shown to have significant comprehension problems and need improvement and additional pretesting before they should be included in the GSS.

In sum, I believe that this cognitive interviewing could have been improved considerably, both in its design and implementation, to gather better information about how the questions could have been improved. It is not clear whether the NORC cognitive interviewing staff generally would benefit from training and/or whether only the particular person who ran this project would benefit from such training.<sup>2</sup> But because such training was not done, this project was probably not as helpful to the Board as it might have been.

This conclusion should not be taken as an indication that cognitive pretesting would not be worthwhile for the GSS. In fact, the bits of information gathered by these suboptimal cognitive interviews point to ways that the questions could be improved, and illustrate how more effective information gathering is likely to turn up more improvement routes.

Therefore, I recommend that the Board continue and enhance its commitment to cognitive pretesting of new questions. Doing so will require a change in question submission and review processes, as well as deadlines that are somewhat earlier than those used in recent years. But the scientific benefit of such inconveniences seems quite worthwhile.

---

<sup>2</sup> I would be happy to provide such training (at no cost to NORC) if they would like to have it.

Appendix A:  
Suggestions on Think-Aloud Cognitive Interviewing  
to Pretest Questionnaires

Jon A. Krosnick

Stanford University

March, 2004

Think-aloud cognitive interviews to pretest questionnaires can be done with many different approaches, and there appears to be a great variety to the techniques being used by different investigators currently (see, e.g., Presser et al., forthcoming). This document offers our perspective on one way that cognitive interviews might be conducted to pretest questionnaires for surveys. We have used this method in the past and found it to work well. Although we designed the wording of the script shown here, the ideas implemented are inspired by the writings of various experts on cognitive pretesting.

One purpose of pretesting is to detect cases in which questions are worded in problematic ways, because they either (1) lead respondents to infer meanings of questions or answer choices that are not intended by the researchers, or (2) make interpretation difficult and frustrating for a respondent, because he or she cannot infer a coherent intended meaning for a question or answer choice, or because he or she sees two or more different and equally plausible interpretations for a question and cannot easily choose between them.

One possible perspective to bring to detecting such problematic wordings would be for researchers to identify potentially misleading or frustrating wordings in advance of a cognitive pretest and design specific probe questions to ask respondents how they interpret those words or phrases. This approach has the potential to spotlight cases of misunderstanding, and it may also illuminate cases of respondent uncertainty or frustration.

This approach also focuses respondents on particular words or phrases that the researcher identifies in advance as potentially problematic. This cognitive focusing may alter the ways people think about questions by calling their attention to particular issues. This researcher-induced focusing may send an unintended message to respondents that these words or phrases are especially important to the researchers (because the researchers asked about those issues explicitly). And this may make cognitive processes that unfold during an interview filled with probe questions different from those that would unfold if no such targeted probes were asked (as will be the case in the final survey when implemented in the field).

Therefore, a second, complementary approach to cognitive interviewing is less interventionist and is one we have relied on more heavily in the past. In doing such pretesting, we have strived to encourage respondents only to think aloud as they interpret each question and to generate each answer, so that we can gain insight into the interpretive processes that naturally unfold without targeted intervention. To do this, we ask respondents to restate the meaning of each question in their own words before answering it, and then we encourage respondents to think aloud and verbalize all the thoughts they have as they generate their answers to a question.

We find that this is typically a very difficult process for almost all respondents to implement initially if they don't have experience with it previously. Therefore, we take two steps to enhance respondent performance. First, we have all respondents perform a warm-up practice exercise of thinking out loud at the start of the interview. The script we use for this task appears in Appendix A of this document. The task involves the respondent restating a question in his or her own words and then thinking aloud while generating an answer to the question.

The question asks the respondent to report how many windows are in his or her house. Almost no respondent will have the answer to this question already stored in his or her long-term memory, so this is a nice question to use, because respondents realize they must go through a step-by-step thought process to generate their answers. This means that there is in fact a slowly-executed cognitive process that can be verbalized.

This question is an excellent way to prepare a respondent to use his or her own words to restate each question. "How many windows are there in your house?" is a very simple question. In almost all cases, respondents initially repeat the question back to the interviewer changing little or none of the question text. This gives the interviewer an opportunity to point out to the respondent that every question must be restated using completely different words. Beginning the exercise with such a simple question makes it easier for respondents to restate more complex questions later in the interview.

Very often, respondents have a basement or attic in their home but forget to count the windows in it. With all respondents who do not mention a basement and an attic, we ask them whether have the unmentioned one (or ones) after they complete their thinking aloud. We find that this does not embarrass respondents and instead communicates to them that we are truly interested in carefully generated and accurate answers to our questions.

Also in the appendix are the wordings of probes that we use when respondents do not provide enough think-aloud information spontaneously throughout the actual questionnaire evaluation phase. These probes can be used either to ask for question restating or to get more detail on the cognitive processes of generating answers. We have to implement these probes very often throughout just about every cognitive interview we do.

One of the most difficult tasks for interviewers is to know when and how to probe. We therefore implement extensive training with each new cognitive interviewer, wherein they try out a cognitive interview with a real respondent and afterward review the tape of the interview with the research supervisor, who points out cases where probing could have been done better. After a few such practice trials, cognitive interviewers usually get the hang of how to do the probing.

It is important to strike the right balance between probing too little and probing too much. If an interviewer probes too little, the researcher does not get adequate data to evaluate the questionnaire. If the interviewer probes too much, the respondent can lose confidence in the procedure. This is so because probing when a respondent has nothing more to say leads to many declinations to answer (e.g., I: "Could you tell me more about how you interpreted that question?"; R: "No"), which can undermine a sense of successful collaboration.

Therefore, we try to use silence as a probe routinely. That is, we find that if interviewers simply sit quietly and look at a respondent when he or she stops talking, this suggests the interviewer is expecting to hear more from the respondent, and respondents often deliver more information spontaneously in such situations.

In order for such "silent probing" to work, though, it is important for the pace of the entire interaction between the interviewer and the respondent to be very slow. That is, from the moment the interviewer first welcomes the respondent to the research facility, he or she strives to move slowly, to talk slowly, and to keep the pace of interaction relaxed. That way, the silences do not seem out of character and awkward. More importantly, a slow pace of interaction avoids sending a message to the respondent that the interviewer is in a rush to complete the interview, so that the respondent should rush through as quickly as he or she can, keeping answers short. Interviewers should practice reading the questionnaire very slowly before beginning interviewing to become comfortable with the pace.

In order to make silence work constructively to enhance the quality of information gained from a cognitive pretesting interview, it is important for the interviewer and the respondent to be facing each other in the same room. If the interviewer and respondent are not able to see each other (e.g., because they are talking on the telephone), the respondent cannot see the nonverbal cues of the interviewer. Therefore, silence is ambiguous in its meaning. Silence accompanied by an engaged-looking gaze by an interviewer sends the message of patient interest in more information from the respondent. Silence on the telephone could instead be attributable to the fact that the interviewer is busy recording an answer or looking for the next question or distracted by something unrelated occurring in the same room. Also, a number of social psychological studies show that visual contact between respondent and interviewer enhances the sense of cooperation between the two individuals and improves coordination and task performance.

We therefore conduct all of our cognitive pretesting interviews face-to-face,

sometimes in our lab, and sometimes in respondents' homes (whichever is more convenient given the project's goals). Given this format, we can simulate a telephone interview by reading the questions aloud to respondents and not showing them any written materials. To simulate a paper and pencil or computer-based questionnaire administration, one can present the questions on paper to the respondent and ask the respondent to read each question aloud before restating it and generating an answer.

Here is an example of text that might be used to train interviewers on how to conduct the interview most effectively:

What we want to do is get inside the head of the respondent and learn everything he or she is thinking when INTERPRETING the question and when generating an answer.

We need to hear A LOT from every respondent in response to every question.

First, he/she needs to restate the question in his/her own words and explain what all the words and ideas mean by restating them in different words than are used in the question. You can even do this one sentence at a time if you like. Do not assume that a sentence's meaning is so obvious that there is no need for the respondent to restate it. We must have every respondent restate all of it to see how he/she understands the meaning of all parts of the question.

If a respondent restates the majority of a question using different words but repeats one or two key words or phrases from the text of the question, probe the respondent to ask how he or she interpreted those words or phrases in the context of the question (rather than requesting restatement of the entire question).

Then the person needs to explain all steps in how he/she generated an answer to the question.

To accomplish this, you need to speak VERY slowly and pause for LONG times VERY often from the minute you start talking to the person when they walk in the room, so the pace of the exchange is very slow. You need to feel like you're being torturously slow in everything you do. If it is not extremely difficult, you are probably not speaking slowly enough. A good test is to read this question from the Think-Aloud Introduction, "How many windows are there in your house?" If it does not take almost three full seconds to read this question, you are not reading slowly enough. You will need to monitor yourself throughout the interviewing process to ensure that you continue to read very slowly, because it is natural to speed up as you get more familiar with the questions

Use silence to elicit more information from each respondent. Just sit calmly and relaxed and look at the respondent and be silent and wait for them to talk and then start talking again and then start talking again. You need to show you're interested but by saying nothing, communicate to them that you are waiting for

them to tell you more. Then, after that pulls everything possible out of them, you need to probe and then probe again and then probe again, over and over, to get them to say everything they can about how they interpreted the question - what each word meant to them - as well as how they generated their answer.

For example, when the question says "20%", you need to ask the person "20% of what? How are you thinking that's calculated?" Go very slowly to clarify the meaning of every little detail in the question. Ask what sort of job they assumed they were working in and why. Ask what year they were assuming they were in when they made the judgment (possible answers: 2002, the year when I really was 30, maybe something else). What does "which will depend on the investments you make" mean to you? And on and on.

In order to perform all of these steps properly, you will need to be very familiar with the questionnaire before you begin interviewing. Study each question so that you do not need to think about the skip patterns or the wording of the question. Once you begin interviewing, a deep familiarity with the instrument will allow you to be more aware of when to probe for more information. If you do not understand the question, you will likely overlook opportunities to probe for a better understanding to detect when the respondent does not understand the question. Furthermore, in actual practice, the line between the respondent restating a question and thinking aloud as he or she answers is somewhat blurry. A deep understanding of the questionnaire will save you from probing for information that the respondent has already provided to you, which can be both embarrassing and can lead respondents to take the interview less seriously.

To help the interviewer calibrate his/her reading speed, it is useful to have him/her practice reading the following paragraph. If he/she is reading at the right speed, this should take about one minute and 45 second to read:

“One last thing I want to tell you is this: It is very important that you think carefully about each question and give me accurate and complete information. There may be some cases when you don’t know the exact answer to a question. When this happens, it would be most helpful if you would tell me you’re unsure and tell me what you’re unsure about. Then, it would be best for you to generate your best guess of the answer and tell me about how you came up with that answer. Feel free to take as much time as you need to think about each question, and if it would be helpful to you, I can reread any question to you again if you like.”

As interviewers become increasingly familiar with the script, they often find themselves reading more quickly, so it is useful to have the interviewer practice this timing exercise regularly throughout the fielding of a cognitive pretesting exercise, to prevent acceleration.

To analyze the data yielded by cognitive pretest interviews, the project PI

typically listens to tape recordings of the interviews to identify instances in which questions are misinterpreted by respondents or cases where respondents express uncertainty about which of multiple plausible interpretations is correct or cases in which respondents say they are unable to generate any interpretation with confidence. We also look for nonverbal evidence of question problems, such as long pauses or stumbling for words while restating questions.

Question misinterpretations sometimes do not become clear until after the respondent has restated a question and begun to answer it. That is, a question restatement might seem appropriate, but a respondent's answering strategy might reveal a difference between the intended and actual interpretations of the question. Therefore, it is important to monitor answer generation just as much as question restatement.

We do not include targeted probes in these think-aloud interviews. We find that to do so breaks the flow of the interview and can manipulate the respondents' natural thought processes by leading them to spend time thinking about words or phrases that they would not naturally think much about. Of course, separate interviews can be conducted that implement targeted probes by asking for interpretations of specific words in questions or by asking specific questions about how respondents generated answers. But we do not mix the two types of cognitive pretesting.

Once we have identified potential problems with question wordings, we typically rewrite the questionnaire making our best guesses about what will repair the problems. It is possible to then retest the repaired questionnaire to assess whether fewer interpretation problems emerge.

Usually, the results of cognitive pretesting have powerful face validity – the misinterpretations are easy to understand in retrospect, and making repairs to wordings to prevent such problems is usually not difficult.

### Reference

Presser, S., Rothgeb, J., Couper, M., Lessler, J., Martin, E., Martin, J., and Singer, E. (forthcoming) Questionnaire Development, Evaluation, and Testing Methods. New York: John Wiley.

## Think Aloud Introduction and Practice Task

Before we begin, I want to mention that I will be speaking very slowly in our conversation. The reason for that, is that I will be reading you some very complicated information, and I want to make it easier for you to understand and to give you plenty of time to think about what I'm saying.

I just want you to know that this interview will be completely confidential. By this I mean that nothing from this interview will have your name on it or any other indicator that could trace it back to you. Any record of this interview will refer to you by a number only.

In this interview, I will be reading you the questions that are printed on these pages and asking you to answer each one. I will ask you one question at a time, and you can answer each one out loud. To save me the trouble of having to write all your answers down, I'd like to ask whether it would be ok with you to tape record the conversation. That way, I can listen to the tape later and think about your answers. Is that ok?

At some points it might be tempting for you to want to look at the sheets I'm reading from. However, we are trying out a questionnaire that is ultimately going to be read to people who won't be able to see it. So, it would be best if you do not look at the paper I'm reading from. Also, please wait until I have completed the entire question before beginning your answer.

When you listen to each question, I'd like to ask you to do something in addition to just giving me your answer. It would be most helpful if you would think out loud in two ways. After you hear each question, first please restate the question in your own words. We want to learn about how you interpret the questions I will ask you, and one good way to do that is for us to see how you restate the ideas in the question but using different words that express the same meaning to you.

Second, we'd like to learn about how you come up with your answer to each question. To learn about how you're thinking, after you restate the meaning of each question, please say out loud as many of your thoughts as you can while you are thinking about how to answer each question.

That way, I can get a sense of how you're interpreting each question and how you decide on your answers.

To help you out, I have a simple reminder piece of paper here that I'll put on the table in front of you. It says: "1) Restate the question in your own words 2) Think out loud as you generate your answer." This is just to remind you that each time I ask you a question, I'd like to ask you please to do both of these things.

If you forget to do one or both, I'll remind you. Ok?

Because this kind of thinking aloud is probably not something you're used to doing, it might be helpful for you to get a little practice at doing it. So, let me give you an example.

Imagine that I ask you: "How many windows are there in your house?"

If I asked you this, you would first have to decide what I'm asking you to do. So let me repeat the question and ask you to restate it in your own words. "How many windows are there in your house?"

[RESPONDENT ANSWERS]

[IF R DOES NOT REPEAT VERBATIM] Great. Thanks.

[IF R REPEATS VERBATIM] Let me point something out to you. When you restated the question, you used the same words that I used. So, for example, I said "How many" and you said "How many." I said "windows" and you said "windows." But in order for me to understand how you interpret each question, I need you to say the question back to me using different words. So, let me repeat the question one more time and see if you can repeat it back to me in different words.

"How many windows are there in your house?"

[If R cannot/has problems with this] Let me give you an example of how I could do this. Here's a restatement of the question in my own words: "Would you please count up the number of pieces of glass permanently installed in the walls, doors, or ceiling in the building in which you usually sleep?" So you see how I used different words to express everything? Like instead of saying "house," I said "the building in which you usually sleep." That's what I would need you to do for each question I ask you today, so I can find out how you interpret each one. Does that make sense?

Now, if I asked you that question, and you were going to answer it, you would probably have to mentally walk through your house, picture all the windows, and count them up. And you could do that and then simply tell me the result. So you might just say "10".

But for this interview, we really need to know all of the thoughts that go through your mind as you're interpreting each question and coming up with your answer. It doesn't help us very much just to know the answer without knowing how you thought about the question and how you got your answer. So just saying "10" to answer the question about windows wouldn't help us much.

To give you some practice at thinking out loud, could you please tell me everything you're thinking and seeing in your mind as you mentally walk through your house and count up the windows.

That was great! Thanks! Now, did that seem comfortable to you?

Do you have any questions about how to do this?

[IF BASEMENT OR ATTIC NOT MENTIONED] Do you have a basement or attic?

[IF FORGOT BASEMENT OR ATTIC] It's natural to forget some things like the basement or attic sometimes, but I'd be really grateful if you are willing to think carefully about each question and give me accurate and complete information. There may be some cases when you don't know the exact answer to a question. When this happens, it would be most helpful if you would tell me you're unsure and tell me what you're unsure about. Then, it would be best for you to generate your best guess of the answer and tell me about how you came up with that answer. Feel free to take as much time as you need to think about each question, and if it would be helpful to you, I can reread any question to you again if you like.

[IF R DID NOT FORGET] One last thing I want to tell you is this: It is very important that you think carefully about each question and give me accurate and complete information. There may be some cases when you don't know the exact answer to a question. When this happens, it would be most helpful if you would tell me you're unsure and tell me what you're unsure about. Then, it would be best for you to generate your best guess of the answer and tell me about how you came up with that answer. Feel free to take as much time as you need to think about each question, and if it would be helpful to you, I can reread any question to you again if you like.

Great. Now that you've got the hang of this, I'd like you to think about the questions I will ask you in the same way. After I read each question, please restate the question in your own words, and then tell me everything you're thinking as you're deciding what your answer will be. Ok?

Before we get started, do you have any [other] questions?

## **THINK ALOUD PROBES**

### **GENERAL PROBES**

Let me reread the question to you and ask you to tell me please how you would restate that question in different words?

Let me reread the question to you and ask you to tell me please how you would restate that question in your own words?

In your own words, what is that question asking you?

Could you tell me what you thought about when getting to your answer to that question?

What were you thinking about when you were coming up with your answer to that question?

What do you mean by XX?

Can you tell me more about XX?

What went on in your mind as you were answering that question?

Could you tell me a little more about what you were thinking as you were answering that question.

### **“DON’T KNOW” PROBE**

It would be most helpful if you could do the best you can at generating an answer to this question, and to think aloud while doing it.

Even if you don’t know the exact answer to the question, it would be most helpful if you could try to answer the question as best you can, and if you could think aloud while doing it.

- 1) Restate the question in your own words.
- 2) Think out loud as you generate your answer.

**Appendix B:**

**NORC Report on Cognitive Pretesting**

---

**NORC** at the UNIVERSITY OF CHICAGO

---

*Social Science in the Public Interest*

Report on Cognitive Interviews  
Conducted on Items for the  
General Social Survey

August, 2007

## I. Introduction

What follows is a summary of cognitive interviews on new items for the GSS conducted July 25-August 3, 2007. A total of 12 interviews were run. Respondents ranged in age from 25 to 66 with a mean of 45.7. Seven were female and 5 were male. Five were White and five African American. Eight were non-students. There were 5 unemployed, 2 retired, and 5 employed respondents. There was one respondent with an MBA and one who had not gone beyond high school. The rest had between 2 and 4 years of college. All but one respondent (an African-American female) reported "straight" as their sexual preference. The materials used may be found in Appendix A.

It should be noted that the results described below are not the results of objective research based on statistically selected, representative samples, and are reflective only of the small number of respondents participating. As a result, words like "most" and "many" are relative only to the small groups of participants. A finding indicative of the presence of a concern or issue only means that that issue does occur in *our* self selected groups. It should not be interpreted as indicative of any level of prevalence in the general population or of a conclusive, reliable, or reproducible finding.

Similarly, if something seems not to be an issue or a problem for *our* respondents, it should not be interpreted as strong evidence that it will not be a problem in the general population.

## II. Unwanted Advances by Clergy against Adults

Respondents did not seem to have any difficulty related to the comprehension or reporting of the information requested in this segment of the survey. However, an important issue was encountered in that a number of the questionnaire items begin, "Now think about church, synagogue, or other religious settings" or "Did this happen with a leader in a congregation you were yourself attending?" or "Do you know of other people ... in a place you were attending religious services?" The problem here is that many of the respondents reported that they do not attend church (synagogue, or other religious setting) so that the questions about place "you yourself were attending" do not apply to them. Most seemed to indicate that the issue of clergy abuse was an infrequent occurrence in their frame of reference in the first place, but indicated that by restricting the questions to apply only to congregations they were attending insured a "no" answer because they were not attending any congregation. While some said this framing issue would make a difference in their answer, others indicated they still did not know anyone to whom this applied.

## III. Science Module (G)

The "New Science Questions" module was administered in "split halves" to reduce respondent burden. Questions were randomly assigned to forms

resulting in 2 subsets (see Appendix A). Six respondents completed Form 1 and 5 respondents (the gay respondent was not administered the science module) completed Form 2.

Scores on Form 1 averaged 96.7%. Scores on Form 2 averaged 82.6%. There were only 4 scores of less than 100% and two of these came from each form. The less than perfect scores were evenly divided between students and non-students, though the two lowest scores came from respondents with 2 years of college or less.

Most respondents felt that the questions were clearly worded and were easy. Some, however, noted that they felt alternatives A and B of question 9 were not different enough to be clear and that, depending on the level at which you processed them, they could both be acceptable. One of these respondents ultimately settled on B, but got one of the other questions wrong. The other settled on A, but that was the only question they missed.

Additionally, some thought that the erosion question was not clear, but there was no recommendation on how to improve it. Some questioned the use of the term "most important" in question 1. Respondents felt the graphics were clear and helpful. Note that on our copies, the resolution was not constant and we needed to darken some of the images to make them clearer.

There was no clear consensus regarding relative ease/difficulty of the questions, though more seemed to think that question 8 was quite easy and there was some indication that question 3 was difficult and/or unclear.

#### IV. Citizenship

All respondents reported that they were citizens of the United States. All but 1 were native born. The other, though not born in the US, was not a naturalized citizen, but was a citizen from birth, just not born here.

All thought that the questions were sufficiently well worded, though one suggested that "dual citizenship" was not captured.

#### V. Panel Module

The items in the "Panel Module" were mostly not new to the GSS. Respondents in our study did not seem to have any major problems answering these questions and thought in general that they were clear and unproblematic. Some respondents did, however, mention that the question "GRNLAWS" was perhaps not a YES/NO dichotomy, but was rather a "matter of degree."

There was also some expression that the "ALLY..." questions (related to whether various countries were perceived as allies of the U.S.) were less easy to fit into the alternatives given.

## VI. Gay/Lesbian/Bisexual Life Experiences Module

There was only one respondent from the replies to the recruitment flyers who reported being lesbian. All other respondents reported being straight and were not given this module.

While most of the questions did not seem to be a problem or pose a particular difficulty to the respondent, the following comments were made. The respondent wanted to indicate "some of them" as an answer to Q18, but the answer she settled on was C. about half. Perhaps the response frame should be modified.

With regard to Q26, the respondent reported that, while she had not been "prevented from buying or moving into a house or apartment...", there was a situation in which she was later asked to leave when her orientation became known.

Item 27 was identified as not clearly addressing "self-employed."

The remainder of the survey was either skipped (because of the skip pattern) or not a problem.

Appendix A: Questions Used in the Cognitive Interviews

## Unwanted Advances by Clergy against Adults

CA1. Sometimes at work people find themselves the object of sexual advances or propositions from supervisors. The advances sometimes involve physical contact and sometimes just involve sexual conversations. Have you experienced such advances?

Yes .....1  
 No .....2

Probe CA1: Do you think this question is clear? Do you feel you understand what it is asking?

---



---



---

CA2. Now think about church, synagogue, or other religious settings. Since you turned 18, have you ever found yourself the object of sexual advances or propositions from a minister, priest, rabbi, or other clergyperson or religious leader who was not your spouse or significant other?

Yes .....1  
 No .....2 ► **SKIP TO 4.**

CA3. Did this happen with a leader in a congregation you were yourself attending?

Yes .....1  
 No .....2 ► **SKIP TO 4.**

PROBE CA3. How did you interpret the word "leader" in this question?

---



---



---

CA3a. With how many different leaders has this happened to you?

NUMBER: \_\_\_\_\_

FOR THE FOLLOWING QUESTIONS, PLEASE THINK OF THE LEADER WITH WHOM YOU HAD THIS EXPERIENCE MOST RECENTLY:

CA3b. Did you and this leader ever become an openly acknowledged couple?

Yes        1

No         2

Probe: What does the phrase "openly acknowledged" mean to you?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

CA3f. Was this leader someone to whom you went for counseling?

Yes .....1

No .....2

Probe: What kind of counseling was it?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

CA3g. Was this leader someone who was at the time married to someone else?

Yes .....1

No .....2

CA3h. Did you have sexual contact with this leader?

Yes .....1

No .....2

CA3i. Was this leader male or female?

Male .....1

Female.....2

CA3j. Did you become involved in an ongoing relationship with this leader?

Yes 1 ► **GO TO 3k.**

No 2 ► **SKIP TO 3l.**

CA3k. Did this leader say or do anything to try to keep you from telling other people about the relationship?

Yes .....1

No .....2

CA3l. Have you ever told anyone about this experience?

Yes 1 ► **GO TO 3m.**

No 2 ► **SKIP TO 4.**

CA3m. Did you ever tell anyone in a position of authority in your congregation, denomination, or religious group?

Yes .....1

No .....2

CA4. Do you know of other people who, as adults, were the object of sexual advances or propositions from a minister, priest, rabbi, or other clergyperson or religious leader in a place you were attending religious services?

Yes 1 ► **GO TO 4a.**

No 2 ► **SKIP TO 5.**

CA4a. Were any of these adults close friends or family members of yours at the time they experienced this sexual advance?

Yes .....1

No .....2

CA5. If you or someone you know is a victim of sexual abuse, would you like to receive information about where you can go for help? If you would like to receive this information, please circle 'yes' below. By circling 'yes' you will receive this information by U.S. mail. This information will be kept confidential.

Yes .....1

No .....2

**THANK YOU FOR YOUR COOPERATION. PLEASE PLACE FORM IN ENVELOPE, SEAL IT, AND GIVE IT TO THE INTERVIEWER.**

## SCIENCE FORM 1

The following items deal with general knowledge related to science and research. Please consider each question as though it were part of a larger survey. Then I will ask you some questions about each item.

6. A farmer thinks that the vegetables on her farm are not getting enough water. Her son suggests that they use water from the nearby ocean to water the vegetables. Is this a good idea?

- A) Yes, because there is plenty of ocean water.
- B) Yes, because ocean water has many natural fertilizers.
- C) No, because ocean water is too salty for plants grown on land.
- D) No, because ocean water is much more polluted than rainwater.

a. Was this question clear to you?

---

---

---

b. What would have made it a better question?

---

---

---

7. Which one of the following is **NOT** an example of erosion?

- A) The wind in the desert blows sand against a rock
- B) A glacier picks up boulders as it moves
- C) A flood washes over a riverbank, and the water carries small soil particles downstream
- D) An icy winter causes the pavement in a road to crack.

a. What do you usually think of when you hear the word "erosion?"

---

---

---

b. What would have made this question a better question?

---

---

---

4. Lightning and thunder happen at the same time, but you see the lightning before you hear the thunder. Explain why this is so.

---

---

---

---

---

---

---

a. Was it easy to express your answer in a way that you feel gets at the important points? If not, why?

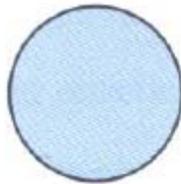
---

---

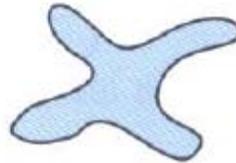
---

2. The two objects shown here have the same mass, but object B loses heat more quickly than object A.

### Body Structures and Heat Loss



**A**



**B**

Which combination of bodily features would be BEST suited to a small animal that lives in a cold climate and needs to minimize heat loss?

- A) long ears and a long body
- B) small ears and a short tail
- C) a long nose and a long tail
- D) a short nose and large ears
- E) a long tail and a short nose

a) Was the diagram helpful in answering this question? If not, why not?

---

---

---

9. How do most fish get the oxygen they need to survive?

- A) They take in water and break it down into hydrogen and oxygen
- B) Using their gills, they take in oxygen that is dissolved in water
- C) They get their oxygen from the food they eat
- D) They come to the surface every few minutes to breathe air into their lungs.

a) How easy or difficult was this question?

---

---

---

b) How sure are you of your answer to the survey question?

---

---

---

3. Which of the following is a key factor that enables an airplane to lift?

- A) Air pressure beneath the wing is greater than that above the wing.
- B) Pressure within the airplane is greater than that of the outside.
- C) Engine power is greater than that of friction.
- D) The plane's wing is lighter than air.

a) Is this question clear?

---

---

---

b) What would make it better?

---

---

---

5. A solution of hydrochloric acid (HCl) in water will turn blue litmus paper red. A solution of the base sodium hydroxide (NaOH) in water will turn red litmus paper blue. If the acid and base solutions above are mixed in the right proportion, the resulting solution will cause neither red nor blue litmus paper to change color.

Explain why the litmus paper does not change color in the mixed solution.

---

---

---

---

---

---

a) Is this question clear?

---

---

---

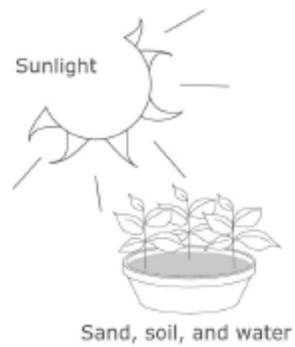
b) What would make it better?

---

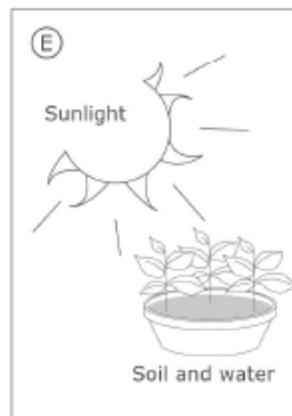
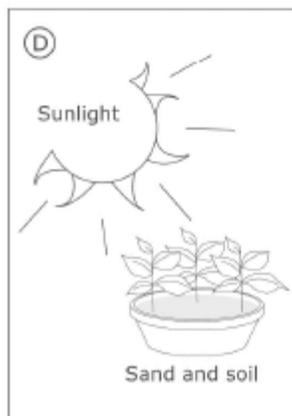
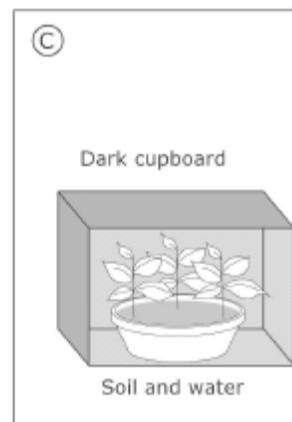
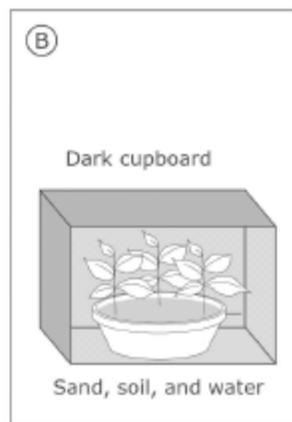
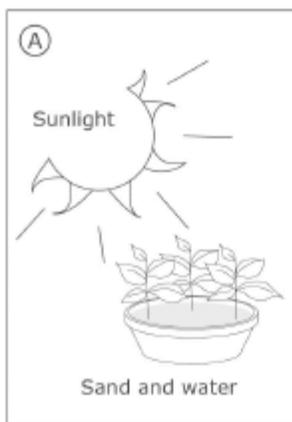
---

---

14. A gardener has an idea that a plant needs sand in the soil for healthy growth. In order to test her idea she uses two pots of plants. She sets up one pot of plants as shown below.



Which ONE of the following should she use for the second pot of plants?



a) Is this question clear?

---



---



---

b) Was the diagram helpful in answering this question? Why?

---

---

---

## SCIENCE FORM 2

1. What property of water is most important for living organisms?

- A) It is odorless.
- B) It does not conduct electricity.
- C) It is tasteless.
- D) It is liquid at most temperatures on Earth.

c. Was this question clear to you?

---

---

---

d. What would have made it a better question?

---

---

---

8. Traits are transferred from generation to generation through the

- A) sperm only
- B) egg only
- C) sperm and egg
- D) testes

a) How easy or difficult was this question?

---

---

---

b) How sure are you of your answer?

---

---

---

10. For which reason may people experience shortness of breath more quickly at the top of a mountain than along a seashore?

- A) a slower pulse rate
- B) a greater gravitational force on the body
- C) a lower percent of oxygen in the blood
- D) a faster heartbeat
- E) a slower circulation of blood

a) How easy or difficult was this question?

---

---

---

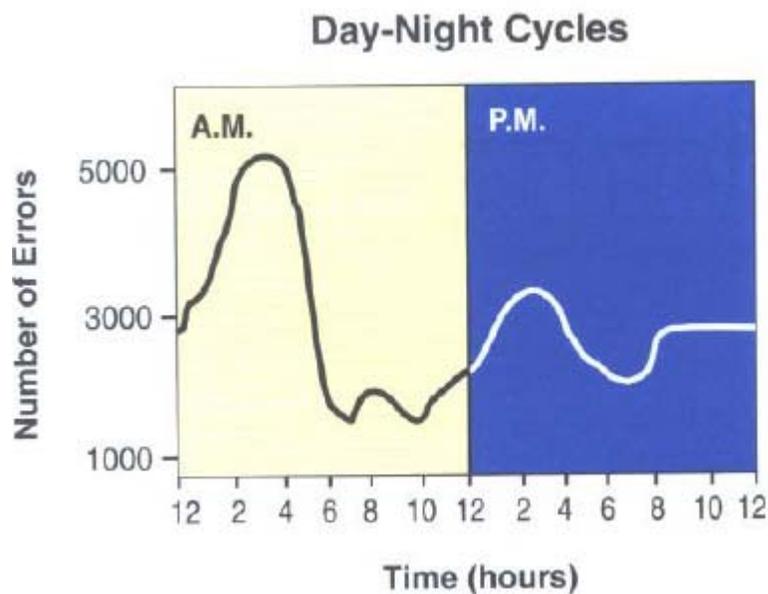
b) How sure are you of your answer?

---

---

---

11. Day-night rhythms dramatically affect our bodies. Probably no body system is more influenced than the nervous system. This figure illustrates the number of errors made by shift workers in different portions of the 24-hour cycle.



Based on the data illustrated in the figure, during which of these time periods did the most errors occur?

- A) 2 A.M. to 4 A.M.
  - B) 8 A.M. to 10 A.M.
  - C) 12 P.M. to 2 P.M.
  - D) 2 P.M. to 4 P.M.
  - E) 8 P.M. to 10 P.M.
- a) Is this question clear?

---



---



---

- b) What would make it better?

---

---

---

12. As part of a laboratory experiment, five students measured the weight of the same leaf four times. They recorded 20 slightly different weights. All of the work was done carefully and correctly. Their goal was to be as accurate as possible and reduce error in the experiment to a minimum.

Which of the following is the BEST method to report the weight of the leaf?

- A) Ask the teacher to weigh the leaf.
- B) Report the first measurement.
- C) Average all of the weights that were recorded.
- D) Average the highest and lowest weights recorded.
- E) Discard the lowest five weights.

a. was it easy to formulate an answer to this question? Why?

---

---

---

13. A student wants to find out if temperature affects the behavior of goldfish. He has 4 fish bowls and 20 goldfish. Which of the following experiments should he do?

**A**

Number of fish	5 fish	5 fish	5 fish	5 fish
Temperature	15°C	20°C	25°C	30°C

**B**

Number of fish	6 fish	6 fish	4 fish	4 fish
Temperature	20°C	20°C	30°C	30°C

**C**

Number of fish	8 fish	6 fish	4 fish	2 fish
Temperature	25°C	25°C	25°C	25°C

**D**

Number of fish	8 fish	6 fish	4 fish	2 fish
Temperature	15°C	20°C	25°C	30°C

a) How easy or difficult was this question?

---

---

---

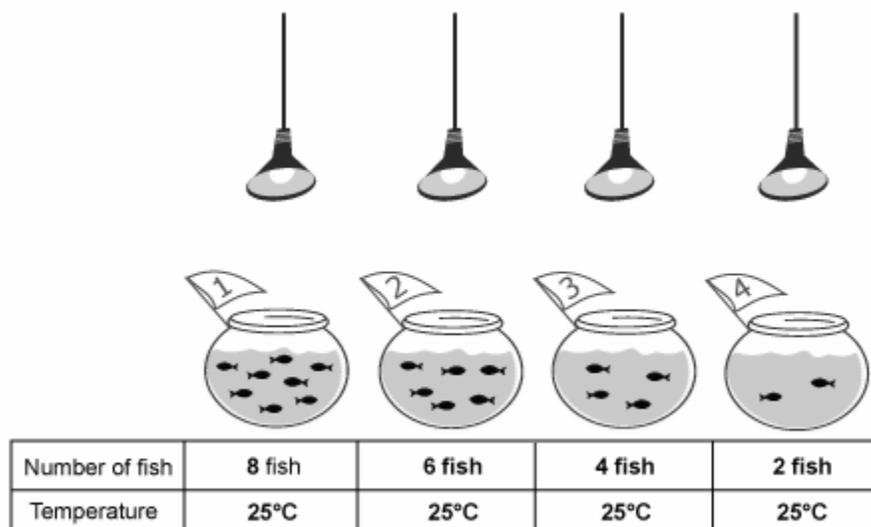
b) How sure are you of your answer?

---

---

---

15. What is the scientist trying to find out from this experiment?



- A) If the number of fish in the fish bowl affects the behavior of the fish.
- B) If the temperature of the fish bowl affects the behavior of the fish.
- C) If the temperature and the amount of light affect the behavior of the fish.
- D) If the number of fish, the temperature, and the amount of light affect the behavior

of the fish.

16. Why did you choose that answer?

- A) Because I already know what affects the behavior of fish.
- B) Because that is what is allowed to change in this experiment.
- C) Because that is what stays the same in this experiment.
- D) Because that is what the scientist decided to include in this experiment.

a. was it easy to formulate an answer to these questions? Why?

---

---

---

b. Was the diagram clear?

---

---

---

### CITIZENSHIP

C1. Were you born in this country?

Yes	1
No	2

C2. [Screening instruction: Ask of Respondents who answered “No” to BORN]

Now we would like to ask you about U.S. citizenship. Are you?

- a. A U.S. citizen
- b. Not a U.S. citizen

*Interviewer instruction* – If respondent says s/he is “naturalized,” mark “A U.S. citizen.”]

C3. [For respondents who report that they are not U.S. citizens]

Are you

- a. Currently applying for U.S. citizenship?
- b. Planning to apply for U.S. citizenship
- c. Not planning to apply to become a U.S. citizen

[record if *Volunteered* – Not eligible to become a U.S. citizen]

---

Probe Ca:

Why \_\_\_\_\_

Record any problems encountered when administering this section:

---



---



---

Probe Cb. Do you feel that these questions adequately address your citizenship situation?

---



---



---

Panel Module

1. GRNLAWS (1996)

On the whole, do you think it should or should not be the government's responsibility to impose strict laws to make industry do less damage to the environment?

- a. YES
- b. NO

2. GRNPRICE (1993,1994)

How willing would you be to pay much higher prices in order to protect the environment?

3. TEMPGEN1 (modified 1994)

In general, do you think that global warming caused by burning fossil fuels like oil and coal is...

- a. Extremely dangerous for the environment,
- b. somewhat dangerous,
- c. not very dangerous,
- d. not dangerous at all the for environment.

4. Modified MEDCARE1 (2006):

In your opinion, who should be most responsible for paying the cost of your family's medical care, . Would you say...

- 1 you and your family
- 2 Government
- 3 Your employer, or
- 4 Private charity?

5. STEMCELL

People disagree about whether the Government should support medical research using stem cells from human embryos. Do you

- a. strongly favor,
- b. somewhat favor,
- c. somewhat oppose or
- d. strongly oppose

expanding stem cell research by allowing federal funding for research that uses newly-created stem cells obtained from human embryos?

## 6. IMMEFF

In the long run, do you think that people who are immigrating to the United States today

- a. will make American society better,
- b. will make American society worse, or
- c. won't affect American society one way or another?

## 7. IMMILL

How serious a problem do you think the issue of *illegal* immigration is for the country right now --

- a. very serious,
- b. somewhat serious,
- c. not too serious, or
- d. not at all serious?

## 8. IMMWRK

Generally, do today's immigrants work

- a. harder
  - b. not as hard, or
  - c. no difference
- than people born here.

## 9. IMMPTY

When the U.S. government is deciding which immigrants to admit to this country, should priority be given to people who have family members living in the United States, or should priority be given to people based on education, job skills, and experience?

---

---

---

## 10. TERRATT

How concerned are you about the possibility there will be more major terrorist attacks in the United States? Is that something that worries you

- a. a great deal,
- b. somewhat,
- c. not too much or
- d. not at all?

## 11. Modified USWAR (1972-1983)

Do you expect the United States to enter another war within the next ten years?

- a. YES
- b. NO

## 12-16. ALLYFR, ALLYRUS, ALLYISR, ALLYCH, ALLYUK

For each of the following countries, please say whether you consider it

- a. an ally ,
- b. friendly but not an ally,
- c. unfriendly, or
- d. an enemy

of the United States.

- 12. France \_\_\_\_\_
- 13. Russia \_\_\_\_\_
- 14. Israel \_\_\_\_\_
- 15. China \_\_\_\_\_
- 16. United Kingdom \_\_\_\_\_

## 17-20. STOPPED, ARRESTED, CONVICTED, INCARCED,

At any time in the past 12 months, were you:

- a. Stopped by the police?
- b. Arrested?
- c. Convicted of a crime?
- d. Incarcerated?

## 21-26. Negative events

In the past 12 months, have you been

- 21. A patient in a hospital, sanatorium, convalescent or nursing home (apart from having a baby)
- 22. Lacking health insurance coverage (e.g., Medicare, Medicaid, Blue Cross, an HMO, etc.)
- 23. Unable to work at your job or carry out your regular activities for one month or more because of illness or injury
- 24. Unemployed or looking for work for as long as a month
- 25. Pressured to pay bills by stores, creditors, or bill collectors
- 26. Behind in paying the rent or mortgage

## GSS GAY/LESBIAN/BISEXUAL LIFE EXPERIENCES MODULE

1. Since the age of 18, have your sex partners been:
  - A. Only men
  - B. A few women, but mostly men
  - C. Equally men and women
  - D. A few men, but mostly women
  - E. Only women
  - F. I have not had any sex partners

### SKIP PATTERN:

#### MALE RESPONDANTS:

Responses A thru D:

PROCEED TO Q2.

Responses E & F:

SKIP TO Q3

#### FEMALE RESPONDANTS:

Responses B thru E:

PROCEED TO Q2

Response A and F:

SKIP to Q3

2. At about what age were you when you first told someone that you had sex with someone of the same sex?
  - A. Under age 14
  - B. Age 14-17
  - C. Age 18-25
  - D. Age 26-35
  - E. Age 36-45
  - F. Age 46-55
  - G. Age 56-65
  - H. Age 66 or older
  - I. I have never told anyone

### PROCEED TO Q3

3. Which of the following best describes you?
  - A. Gay, lesbian, or homosexual
  - B. Bisexual, mostly attracted to men
  - C. Bisexual, equally attracted to men and women
  - D. Bisexual, mostly attracted to women
  - E. Heterosexual or straight

**Probe: Was this set of alternatives adequate for you to answer this question accurately?**

---



---



---



---

If NO:

What is missing?

---



---

**SKIP PATTERN:**

**MALE RESPONDANTS**

Response E to Q3 and (Response E or Response F) to Q1: **EXIT SURVEY**

All others: **PROCEED TO Q4**

**FEMALE RESPONDANTS**

Response E to Q3 and (Response A or Response F) to Q1: **EXIT SURVEY**

All others: **PROCEED TO Q4**

4. At about what age were you first sexually attracted to someone of the same sex?
- Under age 14
  - Age 14-17
  - Age 18-25
  - Age 26-35
  - Age 36-45
  - Age 46-55
  - Age 56-65
  - Age 66 or older
  - I have never been sexually attracted to someone of the same-sex

**SKIP PATTERN:**

**Response E to Q3: SKIP TO Q6**  
**All others: PROCEED TO Q5**

5. At about what age were you when you first told someone that you were GAY/LESBIAN/BISEXUAL [from Q3]?
- Under age 14
  - Age 14-17
  - Age 18-25
  - Age 26-35
  - Age 36-45
  - Age 46-55
  - Age 56-65
  - Age 66 or older

I. I have never told anyone

**PROCEED TO Q6**

## PARTNERSHIP STATUS

6. Which of the following best describes your current relationship situation?
- A. I am in a steady relationship with a woman and we live together
  - B. I am in a steady relationship with a man and we live together
  - C. I am in a steady relationship with a woman and we do not live together
  - D. I am in a steady relationship with a man and we do not live together
  - E. I am not in a steady relationship right now

**Probe: Was this set of alternatives adequate for you to answer this question accurately?**

---



---



---



---

If NO:

What is missing?

---



---



---



---

## PROCEED TO Q7

7. What is your current legal marital status?
- A. Legally married
  - B. In a civil union or registered domestic partnership
  - C. Separated
  - D. Not currently married or in a civil union or registered domestic partnership

**Probe: Was this set of alternatives adequate for you to answer this question accurately?**

---



---



---



---

If NO:

What is missing?

---

---

**SKIP PATTERN:****Responses A thru C to Q7:****PROCEED TO Q8****Response D to Q7:****SKIP to Q9**

8. What is the sex of your [SPOUSE/CIVIL UNION PARTNER/DOMESTIC PARTNER] (from Q7)?

- A. Male
- B. Female

**PROCEED TO Q9****CHILDREN**

9. Have you ever GIVEN BIRTH TO [if female]/FATHERED [if male] a child?

- A. Yes
- B. No

**PROCEED TO Q10**

10. Have you ever legally adopted a child?

- A. Yes
- B. No

**SKIP PATTERN:****Response A to Q10:****SKIP TO 14****Response B to Q10:****PROCEED TO Q11**

11. Would you like to legally adopt a child some time in the future?

- A. Yes
- B. No

**SKIP PATTERN:****Response B to Q9 and Response B to Q10:****PROCEED TO Q12****All others:****SKIP to Q14**

12. Looking to the future, if it were possible would you want to raise a child at some time in the future?

- A. Yes, definitely
- B. Yes, probably
- C. No

D. Not sure

**PROCEED TO Q13**

**Probe: Were these/was this question clear to you?**

---



---

**If NO:**

**What was unclear?**

---



---



---



---



---

13. Have any children who at the time were under age 18 ever lived with you under your care and responsibility?

- A. Yes
- B. No

**SKIP PATTERN:**

**Response A to Q13:        SKIP TO Q17**

**Response B to Q13:        SKIP TO Q18**

14. When your child or children were first [BORN/ADOPTED], who was the other parent? (Check all that apply if you had more than one child):

- A. My opposite-sex spouse or partner
- B. My same-sex spouse or partner
- C. Someone else
- D. I was a single parent

**PROCEED TO Q15**

15. Are you currently the legal biological or adoptive parent of a child under age 18?

- A. Yes
- B. No

**SKIP PATTERN**

**Response A to Q15:        PROCEED to Q16**

**Response B to Q15:        SKIP to Q17**

- 16. Are your children under age 18 living with you now at least some of the time?
  - A. Yes, all of them live with me at least some of the time
  - B. Some live with me at least some of the time
  - C. None live with me

**SKIP PATTERN**

**Response A or Response B to Q16:**  
**Response C to Q16:**

**SKIP to Q18**  
**PROCEED TO Q17**

- 17. Are you currently living in a household where any children under 18 are living with you at least some of the time and are under your care and responsibility?
  - A. Yes
  - B. No

**PROCEED TO Q18**

**DISCRIMINATION**

- 18. Some people are very open about their sexual orientation while others are not. About how many of your coworkers know that you [(ARE GAY) (ARE LESBIAN) (ARE BISEXUAL) (HAVE SEX WITH MEN) (HAVE SEX WITH WOMEN)]:
  - A. all of my coworkers
  - B. almost all
  - C. about half
  - D. less than half
  - E. none of them
  - F. I am not employed

Probe: Was it easy to come up with an answer to this question?

---



---



---

Probe: How sure are you of your answer?

---



---



---

**PROCEED TO Q19**

19. In the last five years, have you been denied a job or been fired from a job because an employer believed you were gay, lesbian, or bisexual?

- A. Yes **SKIP TO Q21**
- B. No **PROCEED TO Q20**

20. Have you ever in your life been denied a job or been fired from a job because an employer believed you were gay, lesbian, or bisexual?

- A. Yes
- B. No

**PROCEED TO Q21**

21. In the last five years, have you been denied a promotion or received a negative job evaluation because an employer believed you were gay, lesbian, or bisexual?

- A. Yes **SKIP TO Q23**
- B. No **PROCEED TO Q22**

**PROCEED TO Q23**

22. Have you ever in your life been denied a promotion or received a negative job evaluation because an employer believed you were gay, lesbian, or bisexual?

- A. Yes
- B. No

23. In the last five years, have you been harassed verbally or in writing on the job by a co-worker because you were believed to be gay, lesbian, or bisexual?

- A. Yes **SKIP TO Q25**
- B. No **PROCEED TO Q24**

**PROCEED TO Q25**

24. Have you ever in your life been harassed verbally or in writing on the job by a co-worker because you were believed to be gay, lesbian, or bisexual?

- A. Yes
- B. No

25. In the last five years, have you been prevented from buying or moving into a house or apartment by a landlord or realtor who believed you were gay, lesbian, or bisexual?

- A. Yes **SKIP TO Q27**
- B. No **PROCEED TO Q26**

**PROCEED TO Q27**

26. Have you ever in your life been prevented from buying or moving into a house or apartment by a landlord or realtor who believed you were gay, lesbian, or bisexual?
- A. Yes
  - B. No

**EMPLOYMENT AND HEALTH INSURANCE**

27. Does your current employer offer health care insurance to you as an employee?
- A. Yes
  - B. No
  - C. Not currently employed

**SKIP PATTERN:****Response A to Q27:****PROCEED TO Q28****All Others:****SKIP to Q29**

28. Which of the following statements best describes your employer's coverage:
- A. Only individual employees are covered
  - B. spouses and children are covered but domestic partners are not covered
  - C. spouses and children are covered and domestic partners are covered
  - D. Don't know

**Probe: Was this set of alternatives adequate for you to answer this question accurately?**

---



---



---

If NO:  
What is missing?

---



---



---

**PROCEED TO Q29**

29. Do you currently have health insurance coverage?
- A. Yes
  - B. No

**SKIP PATTERN:****Response A to Q29:        PROCEED TO Q30****Response B to Q29:        EXIT SURVEY**

30. What is the source of your health insurance?
- A. My employer
  - B. Employer of my SPOUSE/PARTNER [from Q7]
  - C. Employer of someone else in my family
  - D. other

**Probe: Was this set of alternatives adequate for you to answer this question accurately?**

---



---

If NO:  
What is missing?

---



---

**PROCEED TO Q31**

31. Who else in your family has insurance through your current plan? Check all that apply.
- A. My SPOUSE/PARTNER [from Q7]
  - B. Children for whom I am a biological or adoptive parent
  - C. Children for whom I am not a biological or adoptive parent
  - D. Others
  - E. No one

**Probe: Was this set of alternatives adequate for you to answer this question accurately?**

---



---

If NO:  
What is missing?

---

---

---

---

Appendix B: Materials -- Recruitment Flyer, Informed Consent, Stipend Receipt

**PAID VOLUNTEERS NEEDED  
FOR A TRIAL OF  
NEW ITEMS FOR  
THE GENERAL SOCIAL SURVEY(GSS)**

**The National Opinion Research Center at the University of Chicago** is looking for paid volunteers (aged 18 or older) to complete an interview at NORC's Hyde Park office. Interviews will take place between 9:00 A.M. and 2:00 P.M. from July 25 to August 3.

The interviews will last approx 60 minutes and will help us refine an important study on topics of general interest.

Participants will be paid **\$75** for completing the interview.

For more details or to volunteer your participation, call:

John toll-free at (888) 837-8988

## **STATEMENT OF INFORMED CONSENT GSS RESEARCH PROJECT**

### **Purpose of the Study**

NORC is interested in learning more about the format and wording of some new items to be included in the General Social Survey. To help explore these potential items, the company is conducting interviews to find out how clear the items are, how long they take to complete, and whether we have missed anything in the various topics we are interested in.

### **Procedures**

If you agree to participate in this interview, you will meet with an NORC interviewer in a conference room for about one hour.

The interview will discuss various questions related to topics such as attitudes toward gays and inappropriate behaviors by members of the clergy. We would like you to share your thoughts about the items we are constructing. We are not assessing your responses and attitudes; we are only interested in the clarity and wording of the questions and in your willingness to answer them, not in the answers themselves. You may find that some of the questions we are asking may make you feel uncomfortable and you may choose not to answer any question for any reason. You do not have to reveal any specific information about your own experiences unless you choose to do so. You may stop participating at any time, and there are no consequences for you if you choose to stop. And you will still receive the full \$75.

### **Risks and Benefits**

Other than the \$75 you receive there are no other direct benefits from taking part in this study. You will, however, be helping to make improvements in a valuable and extensively used social science research instrument.

There are no known physical or psychological risks from taking part in this study. The topics covered in the questions are similar to those encountered in the daily news media. We will take all possible steps to protect your privacy.

**Recordings**

We would like to audio record the interview discussion so there is an accurate record of comments made. The recording allows us to more carefully study the questions. If you agree, you may ask to stop the recording at any time, and we will turn off the machine. If you agree to record the interview, we will keep it in a locked room or in the safe keeping of a staff person. At a later time, staff from the National Opinion Research Center who are on this project may listen to the interview. However, they must agree to keep your personal data private. At the end of the project the recordings will be destroyed.

**Confidentiality**

You will not be identified in any report of these interviews. Any information with identifying information will be kept in a secure location during the period of the study. This information will be used solely for the purposes of this study and will be destroyed when the study is over.

**Other Information**

Your participation in this study is entirely voluntary. If at any point during the focus group you wish to withdraw as a participant, please notify the focus group moderator.

Please feel free to ask the focus group moderator any questions about the study or call the NORC IRB administrator Kathleen Parks at 773-256-6302 with any questions that you may have about the study or your rights as a participant. If you agree to participate, please sign and date the statement which follows, indicating your informed consent.

- I have read and understood the information presented in this document, and have been given the opportunity to ask any questions. I choose to participate in the study, and understand my right to withdraw as a participant at any time.”
- I allow NORC to audio record my interview. I also allow NORC to play my audio recording to other people working on this project either in the NIS or in another location under the direct supervision of NIS staff.

Print name of participant: \_\_\_\_\_

Date\_\_\_\_\_

Signature of participant:\_\_\_\_\_

Date\_\_\_\_\_

Signature of individual obtaining consent\_\_\_\_\_

Date\_\_\_\_\_

**Receipt for Cash Payment**

I \_\_\_\_\_ have received \$75.00 in cash for  
participation in  
(please print name)  
a cognitive interview on new GSS items.

Received from \_\_\_\_\_

Signature \_\_\_\_\_

Date \_\_\_\_\_ Time \_\_\_\_\_

## **Appendix C:**

### **Example of Cognitive Pretesting Report**

#### **Given to NORC**

## **Evaluating Proposed Pension, Consumption, Risk, and Impatience Questions**

Jon A. Krosnick and Michael P. Tichy  
Department of Psychology and Center for Human Resource Research  
Ohio State University

March, 2004

---

### Introduction

In 2004, the Center for Human Resource Research proposed sets of new questions to ask NLS respondents about their pension plans, their purchasing behavior, their willingness to risk financial security for possible financial gain, and their impatience for receiving a financial award. We conducted this project to evaluate how respondents interpret and answer the drafted questions and to identify ways to improve the questions.

### Procedure

In February, 2004, Michael Tichy interviewed four men and five women to evaluate the proposed questions. We recruited all respondents through an advertisement that appeared for five days in the Columbus Dispatch classified advertisements (the text of the advertisement appears in Appendix A). To be eligible, potential respondents had to be between 38 and 52 years old, be employed, be currently participating in a pension plan, and have participated in a pension plan through a previous employer. All people who responded to the ad were interviewed by telephone by Michael Tichy and his assistants with a screening questionnaire that assessed whether they were eligible and whether they were articulate enough to be effective respondents (the full text of the screening questionnaire appears in Appendix B). We then scheduled each selected respondent to be interviewed face-to-face on an afternoon in February in Lazenby Hall at the Ohio State University.

Michael Tichy conducted all interviews and tape recorded each one (with the respondents' consent) for later analysis.

Each respondent filled out a form that asked for his/her name, address, and social security number and the Center for Human Resource Research subsequently sent each respondent a check for \$100 as compensation.

Jon Krosnick listened to the tape recordings to interpret the respondents' utterances and nonverbal behavior.

## Interview Design

During the interviews, we asked respondents to restate each question in their own words and to think aloud as they interpreted and answered each question, so that we could track their interpretation of the question and the thought processes leading to their selection of an answer. Although this technique was unfamiliar for most of our respondents, they mastered the approach and provided us with very valuable insights into the questions being asked. Interviewer probes led respondents to define terms that were not clear and to ensure that respondents verbalized their thought processes completely. Respondents' effective performance was partly the result of their participation in a training exercise by the interviewer at the start of the interview. The complete text of the "think aloud" instructions and practice exercise appears in Appendix C.

## Questionnaire

The Center for Human Resource Research provided an initial draft of the questions to Michael Tichy, who formatted the questionnaire and sought guidance on handling some issues that required resolution. Guidance was provided by CHRR and BLS personnel, and the final set of questions appears below:

### **Pension Series**

1. In this study, we are interested in learning about the different types of retirement and pension plans that employers offer. There are three main types of retirement and pension plans. When thinking about these different plans, please keep in mind that some employers will offer more than one type of plan.

- In the first type—often called a 'formula' or defined benefits plan—the size of the monthly retirement benefit is based on a formula that usually involves your years of service and salary level.
- In the second type—called a 'savings or an investment' plan—money is accumulated in a savings or an investment account for you until you retire or leave that employer.
- In the third type of plan—sometimes called a cash balance account—workers accumulate money in an account according to a percentage determined by the employer and earn a rate of interest specified by the plan. At retirement, the worker is guaranteed to receive a set balance in the account, but the size of the monthly retirement benefit will depend on whether the worker withdraws the balance in the account or buys an annuity.

Does your current employer offer any of these types of retirement plan to its employees?

Yes (Go to 2)

No (End – this should not happen; if it does, review the screener sheet to make sure they are thinking of the employer(s) that qualified them for the interview.)

-----  
2. Do you participate in a retirement plan that sounds like a cash balance account on your

current job with this employer?

Yes (Go to 2a)

No (Go to 3)

---

2a. In the next few question, please tell us only about your cash balance retirement plan. Roughly how much money is in this account at present? Include both your and your employer's contributions and earnings.

(ENTER AMOUNT. IF NOTHING, ENTER "0").

---

2b. Have you withdrawn any money from this retirement plan that you intend to pay back?

Yes (Go to 2c)

No (Go to 3)

---

2c. What is the total amount you intend to pay back on those withdrawals?

(ENTER AMOUNT. IF NOTHING, ENTER "0").

---

2d. If you were to payback those withdrawals today, altogether, what would be the total value of this retirement plan today?

[INTERVIEWER NOTE: If the respondent already included the withdrawal amount in question 2a, please correct the answer in question 2a.]

(ENTER AMOUNT. IF NOTHING, ENTER "0").

---

3. Do you participate in a 'formula' retirement plan on your current job with this employer?

[INTERVIEWER READ IF NECESSARY: Just to remind you, in a formula plan, the amount of benefits that you receive when you retire is based on a formula that usually involves your years of service and salary.]

Yes (Go to 4)

No (Go to 4)

---

4. Do you participate in a 'savings or investment' retirement plan on your current job with this employer?

[INTERVIEWER READ IF NECESSARY: Just to remind you, in a 'savings or investment' plan, money is accumulated in a savings or investment account for you until you retire. These plans are sometimes called 401K plans, 403B plans, or 457 plans.]

Yes (Go to 4a)

No (Go to 5)

-----  
4a. Roughly how much money is in your account at present? Include both your and your employer's contributions and earnings.

(ENTER AMOUNT. IF NOTHING, ENTER "0").

-----  
4b. Have you withdrawn any money from this retirement plan that you intend to pay back?

Yes (Go to 4c)

No (Go to 5)

-----  
4c. What is the total amount you intend to pay back on those withdrawals?

(ENTER AMOUNT. IF NOTHING, ENTER "0").

-----  
4d. If you were to payback those withdrawals today, altogether, what would be the total value of this retirement plan today?

[INTERVIEWER NOTE: If the respondent already included the withdrawal amount in question 4a, please correct the answer in question 4a.]

(ENTER AMOUNT. IF NOTHING, ENTER "0").

-----  
5. [INTERVIEWER: Please pick the most recent job from the list of jobs in the screener questions for this part of the interview.]

-----  
6. On the phone the other day, we talked about a few of your previous employers that offered retirement plans that you participated in. Now I would like to ask you a few questions about your plans though [employer name] and what happened to them.

-----  
7. Just to remind you, we are interested in learning about the different types of retirement and pension plans that employers offer. There are three main types of retirement and pension plans. When thinking about these different types of plans, please keep in mind that some employers offer more than one type of plan.

- In the first type—often called a ‘formula’ plan—the size of the monthly retirement benefit is based on a formula that usually involves your years of service and salary level.
- In the second type—called a ‘savings or an investment’ plan—money is accumulated in a savings or an investment account for you until you retire or leave that employer.
- In the third type of plan—sometimes called a cash balance account—workers accumulate money in an account according to a percentage determined by the employer and earn a rate of interest specified by the plan. At retirement, the worker is guaranteed to receive a set balance in the account, but the size of the

monthly retirement benefit will depend on whether the worker withdraws the balance in the account or buys an annuity.

-----  
8. Did you participate in a retirement plan that sounds like a cash balance account on your job with this [employer name]?

Yes (Go to 8a)

No (Go to 9)

-----  
8a. In the next few question, please tell us only about your cash balance retirement plan. Roughly how much money is in this account at present? Include both your and your employer's contributions and earnings.

(ENTER AMOUNT. IF NOTHING, ENTER "0").

-----  
8b. Have you withdrawn any money from this retirement plan that you intend to pay back?

Yes (Go to 8c)

No (Go to 9)

-----  
8c. What is the total amount you intend to pay back on those withdrawals?

(ENTER AMOUNT. IF NOTHING, ENTER "0").

-----  
8d. If you were to payback those withdrawals today, altogether, what would be the total value of this retirement plan today?

[INTERVIEWER NOTE: If the respondent already included the withdrawal amount in question 8a, please correct the answer in question 8a.]

(ENTER AMOUNT. IF NOTHING, ENTER "0").

-----  
9. Did you participate in a 'formula' retirement plan on your job with [employer name]?

[INTERVIEWER READ IF NECESSARY: Just to remind you, in a formula plan, the amount of benefits that you receive when you retire is based on a formula that usually involves your years of service and salary.]

Yes (Go to 12)

No (Go to 13)

-----  
12. When you retire, will you be eligible to receive any money or benefits from this plan?

Yes (go to 12a)

No (go to 13)

12a. At what age do you expect to receive or start receiving any money from this plan?  
(SCF question)

---

12b. Do you have a choice about how you will receive benefits? (SCF question)

Yes (go to 12c)

No (go to 12d)

---

12c. What are your choices for how you receive the benefits? Could you receive it as a lump sum distribution or settlement to keep or roll over, regular payments for as long as you live, a payment level that you decide or something else? (SCF question)

(SELECT ALL THAT APPLY)

Receive it as a lump sum distribution or settlement

Receive regular payments for as long as you live

Receive a payment level that you decide

Something else

---

12d. What is the balance of this plan as of today?

(If don't know then go to 12e)

---

12e. Can you give us a range of values that you believe would include your balance in this type of account?

---

13. Did you participate in a 'savings or investment' retirement plan on your job with [employer name]?

[INTERVIEWER READ IF NECESSARY: Just to remind you, In a 'savings or investment' plan, money is accumulated in a type of savings or investment account for you until you retire. These plans are sometimes called 401K plans, 403B plans, or 457 plans.]

Yes (Go to 13a)

No (Go to next section)

---

13a. Some employers offer more than one type of 'savings or investment plan' to employees. How many savings or investment plans did you participate in while you were working at [employer name]?

One (Go to 14)

More than one (Go to 13b)

---

13b. To make it easier for us to talk about these savings plans, I would like to list each of these them—either by their name or by some other phrase that you would associate with a that plan.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_

\*Begin looping through the number of plans listed. Check off as you complete each plan loop for this employer:

1      2      3      4

-----  
 14. Were you entitled to get any money from [plan name] when you left [employer name], or will you be entitled to get any money in the future?

Yes, entitled to take money when left employer (Go to 14A)

Yes, will be entitled to money in the future (Go to 16A)

Yes, BOTH entitled to money when left AND entitled to money in future (Go to 14A)

No, neither (Go to next plan)

-----  
 P01381.00 [QESP-16B\_2A]

14A. What did you do with the money you got from [plan name]?

(READ IF NECESSARY:) For example, transfer it to a different retirement account, did you cash it out, leave the money in this plan, or something else?

(INTERVIEWER: RECORD VERBATIM.)

(SELECT ALL THAT APPLY)

Transferred it to another retirement or investment account (rolled over or reinvested) - put the money into another retirement plan or investment account (Go to 14C)

Took a cash settlement (Go to 15B)

Left the money in this plan (Go to 16A)

Currently receiving repeated payments (Go to next plan)

Haven't received money yet/recently left job

Other (Specify) (Go to next plan if this is the only option selected)

-----  
 14B. Did you put the money into another retirement savings account -that is, reinvest it or roll it over?

Yes (Go to 14C)

No (Go to 15A)

-----

14C. Did you transfer the money from [plan name] yourself, or did your old employer transfer it directly to your new employer?

- R transfer money him/herself
- Old employer transfer directly to new employer

[INTERVIEWER NOTE: If the respondent answers that they transferred money through a brokerage, please treat this as 'R transfer money him/herself.]

Go to next employer; End Pension Questions for this plan

---

15A. Did you take any of the money from [plan name] in cash?

- Yes
  - No (Go to 16A)
- 

15B. What did you do with the cash? Did you use it to pay off debts, transfer it to another retirement or investment account or spend it or save it for some other purpose?

(SELECT ALL THAT APPLY)

- Pay off debts
- Transfer it to another retirement account
- Spend it for some other purpose or save it

Go to next employer; End Pension Questions for this plan

---

16A. Did you leave some of the money [plan name] with [employer name], so that you will receive money when you retire or reach a certain age?

- Yes
  - No
- 

16B. Can you still continue to contribute to [plan name] through (your new/another) employer?

- Yes
- No

Go to next plan

---

17. We have just a few more questions for you.

---

Questions on Risk, Impatience, and Consumption for NLS Surveys

**Consumption Series**

**C1:** Since the 1<sup>st</sup> week of January 2004, what has been your usual WEEKLY expense at the grocery store or supermarket?

\$ \_\_\_\_\_ if answered go to C2.

-----  
**C1a:** Can you give us a range of values that you believe would include your usual spending of this type?  
-----

**C2:** About how much of this amount was for non-food items, such as paper products, detergents, home cleaning supplies, pet foods, and alcoholic beverages?

\$ \_\_\_\_\_ if answered go to C3      **OR**      \_\_\_\_\_% if answered go to C3

-----  
**C2a:** Can you give us a range of values that you believe would include your usual spending of this type?

\$ \_\_\_\_\_ to \$ \_\_\_\_\_

-----  
**C3:** During January 2004, have you (or any other members of your household) purchased meals, snacks, or fast food from restaurants, cafeterias, carry-outs, street vendors, or other such places?

If no, go to C4

-----  
**C3a:** What was the usual weekly expense for these purchases?

\$ \_\_\_\_\_ if answered go to C4.

-----  
**C3b:** Can you give us a range of values that you believe would include your usual spending of this type per week?  
-----

**C4:** About how much was your households' expenditure for telephone service in a usual month in 2003? Please include in this amount your local, long distance, and cell phone service. Do not include any business phones or charges.

\$ \_\_\_\_\_ If answered go to C4b.

[INTERVIEWER NOTE: If asked, the respondent should include taxes and other regular changes for telephone usage.]

-----  
**C4a:** Can you give us a range of values that you believe would include your usual spending of this type?  
-----

**C4b:** Does the amount that you just reported include internet service?

Yes (go to C4c)  
No (go to C5)

-----  
**C4c:** About how much was your households' expenditure for internet service in a usual month in 2003.

-----  
**C4a:** Can you give us a range of values that you believe would include your usual spending of this type?

-----  
**C5:** About how much was your households' monthly expenditure in 2003 for electricity, heating fuel, and water?

\$ \_\_\_\_\_ if answered finish.

-----  
**C5a:** Can you give us a range of values that you believe would include your usual spending of this type?

-----  
**Risk Series**

**R1.** Suppose you have been given an asset. Within a few days, it will be determined what the asset is worth. There is a 50-50 chance it will be worth \$10,000 and a 50-50 chance it will be worth nothing. You have two choices. You can wait to find out how much the asset is worth, or you can avoid the uncertainty by selling the asset before its value is determined at its current market price. What is the lowest price at which you would be willing to sell the asset?

\$ \_\_\_\_\_ If answered go to R2.

-----  
**R1a:** Can you give us a range of values that you believe would include the value? (Use average of min and max for R2, but record both the minimum and maximum here).

**R2.** If you received {Insert answer to R1}, what percentage (0 to 100) of this would you save for the future rather than spend in the current year?

\_\_\_\_\_ If answered go to part B.

-----  
**R2a:** Can you give us a range of values that you believe would include the percent you would spend?

-----  
**Impatience Series**

**I1.** Suppose you have won a prize of \$1,000, which you can claim immediately. However, you have the alternative of waiting one month to claim the prize. If you do wait, you will receive more than \$1,000. What is the smallest amount of money in addition to the \$1,000 you would have to receive one month from now to convince you to wait rather than claim the prize now?

\$ \_\_\_\_\_ If answered go to I2.

-----

**I1a:** Can you give us a range of amounts that you believe would include how much you would need to receive in addition to the \$1,000 to convince you to wait one month?

-----

**I2.** Suppose you have won a prize of \$1,000, which you can claim immediately. However, you have the alternative of waiting one year to claim the prize. If you do wait, you will receive more than \$1,000. What is the smallest amount of money in addition to the \$1,000 you would have to receive one year from now to convince you to wait rather than claim the prize now?

\$ \_\_\_\_\_ If answered go to next section.

-----

**I2a:** Can you give us a range of amounts that you believe would include how much you would need to receive in addition to the \$1,000 to convince you to wait one year?

-----

## Results

### General Issues

In general, the questions about consumption, risk, and impatience seemed to work reasonably well. Some issues of comprehension and response strategy certainly arose, and they are outlined below. But repair of those issues seems likely to be relatively easy to accomplish.

The pension questions seemed more seriously problematic, for a series of reasons. First, most respondents did not have clear and correct understandings of the three types of retirement plans discussed, so this created a series of problems in responding to various questions. Second, some respondents seemed to manifest a form of acquiescence response bias, where if they were not sure about the definition of a plan type but recognized at least a small similarity between the description of the plan provided and their understanding of their own plan, they were inclined to say that their plan was in fact of the specified type. But often, respondents would later say that the same plan of theirs was of a different type, because they noticed a different similarity to that type. These problems led us to recognize the potential to improve the clarity and detail of the plan definitions, which might help the effectiveness of the question sequence.

We begin below by outlining a series of wording changes we recommend be considered. These wording changes are based not on the cognitive pretesting but rather are based simply on our observations about optimal questionnaire design. Then we outline specific observations of problems identified during the cognitive pretesting and suggest possible solutions for these problems.

## Rewording Suggestions Generated *A Priori*

Q1. This set of descriptions contains a large amount of information that some respondents found difficult to retain in memory. One possible solution to this problem might be to hand respondents a show card displaying the names of the plans and some defining information about each. This would minimize respondent memory burden and save time by eliminating the need to repeat the definitions at Q7 and would eliminate the need to read definition reminders that are attached to various questions in this section.

In order to inform respondents about what they are about to hear and why and what they should do with the information provided, it might be helpful to change the Q1 introduction a bit, by saying: “There are three main types of retirement plans. I will describe each of these to you and then ask you some questions about each type.

It’s not clear to me that respondents need to know that employers offer more than one type of plan before hearing about the types of plans. Providing this information is at least a bit distracting and may be confusing because of its implied relevance.

If the third sentence of Q1 is retained, the words “different” and “will” can be removed without compromising clarity.

The descriptions of the three plans are not completely parallel in various potentially important and some less important ways. For example, consider the size of the benefit. The formula plan description explains the size of the benefit provided (without defining the jargony word “benefit”). The savings plan description does not mention anything about the size of the benefit. The description of the cash balance plan does explicitly describe the way the size of the benefit is calculated, but obliquely says only that the size depends on whether the worker withdraws the balance or buys an annuity and offers no further clarification of this.

There is also lack of parallelism regarding money accumulation. The description of the savings plan mentions only where money is accumulated during employment. The cash balance plan description also says that money accumulates in an account, but using slightly different language that might imply a different sort of account, but not very clearly. The formula plan description does not mention where money accumulates (it might help to explicitly say that the worker does not accumulate money in any account).

There is also lack of parallelism regarding who contributes to accounts. The descriptions of the formula and savings plans do not mention whether the worker or the employer contribute any money toward the worker’s retirement funding during employment. The description of the cash balance plan seems to perhaps imply that the worker contributes money to an account (“workers accumulate money ...”) and isn’t explicit about whether the employer contributes.

There is also lack of parallelism regarding account earnings. The cash balance plan description mentions that the account earns interest, whereas the savings plan

description does not mention explicitly earning interest or appreciating in value, although the word “investment” might imply that.

There are some other cases besides “benefit” of using jargony words that are not defined and will most likely not be completely understood by all respondents (e.g., formula, accumulate, annuity). In the formula plan description, “benefit” might mean “cash payment to the worker,” so that might be a clearer and simpler way to say it. I’m not sure it’s necessary in the formula plan description to say “salary level” – is “salary” sufficient? Likewise, “years of service” is jargon and can be more simply expressed as “the number of years you worked there.” And in the savings plan description, it seems that perhaps “until you retire or leave that employer” can be replaced by “until you stop working for the employer.”

Some sentences lack clear meaning. For example, “workers accumulate money in an account according to a percentage determined by the employer and earn a rate of interest specified by the plan.” In that sentence, it’s not clear what the percentage is of or what it means to say a “plan” specifies a rate of interest – is a plan a group of people?

There are shifts in grammatical approach as well – for example, the formula and savings plan descriptions use the words “you” and “your”, whereas the cash balance account description refers to “the worker.” The formula plan is described as “often” being called that, whereas the cash balance account is described as “sometimes” being called that.

All of the above issues may make it difficult for respondents to clearly understand each plan and to clearly understand the differences between the plans. Reducing jargon and increasing parallelism between the descriptions would be helpful.

Typo: In the savings plan description, “your” should be “you.”

Q2. The transition from Q1 to Q2 is a bit awkward. Q1 asks whether the employer offers any of these plans, and Q2 asks whether the respondent participates in a particular type of plan. It would be more natural to transition by asking whether the respondent participates in any of these plans and if yes, to ask which type of plans he/she participates in.

It seems odd to describe the plans in one order (formula, savings, cash balance) and then ask the individual questions in a different order (cash balance, formula, savings). If you use a show card, you will probably want to maintain a consistent order.

Is the word “participate” the best word to use here? It seems like a strange verb and only obliquely describes what the respondent did.

It is not clear which employer is being referenced by the phrase “this employer.”

Q2a. Typo: “question” should be “questions.”

It seems awkward to use the word “us” when in fact an individual interviewer is asking the question, so it should be “me.”

This is the first place where the respondent is told that both the worker and the employer contribute to a cash balance account, and Q4a is the first place where the respondent is told that the worker and the employer both contribute to a savings plan account. This could be mentioned earlier, in the definitions.

Q2b. The sentence structure makes interpreting the question unnecessarily difficult. The initial phrase, “Have you withdrawn any money” sounds like it is meant to say “Have you EVER withdrawn any money”, and only when the latter half of the question is heard will the respondent reinterpret the beginning phrase. It would make it easier for respondents to understand if you first asked if they ever withdrew money from the account and then, if the respondent answers affirmatively, ask whether all of the withdrawn money has been paid back or not.

Q3. Here and elsewhere where an interviewer instruction says “Read If Necessary”, the interviewer should get clear and objective guidelines for determining when to read this added text.

Q4. This is the first time that examples are offered to respondents illustrating the kinds of plans that fit into the “savings or investment” category, and the examples are part of a “Read If Necessary” text. These examples, as well as examples of the other two types of plans should be provided to respondents when the categories are first introduced and could be added to the show card along with the explanations of the categories.

Q4a. This phrasing is awkward because it is not clear that “your account” refers specifically to the respondent’s “savings or investment account.” This could be made more explicit. And the word “earnings” is not clear here – is it meant to refer to the wages earned by the worker or the interest earned on the account balance?

Q4d. It’s not clear what the purpose of the word “altogether” is in this question – is it referring to the withdrawals or the value of the plan. It might be simpler to remove “altogether.”

It isn’t clear from this wording whether the question is asking the respondent to pay back all the withdrawals he/she has made or to pay back only those he/she plans to pay back, as reported in Q4c.

Q8. The phrase “sounds like” is burdensome, because its obvious literal meaning involves sound, whereas its intended meaning here is “falls into the category of.” A more direct phrasing would be preferable.

The phrase “on your job with” is awkward and could be replaced with “while you worked at.”

Q8a. “In the next few questions” is not clear, because the respondent doesn’t know to how many questions this instruction applies. It would be preferable to remove this instruction sentence and rewrite each subsequent question to explicitly mention the cash balance plan. For example, “Roughly how much money is in this account at present?” can be rephrased as “Roughly how much money is in your cash balance retirement plan account at present?” The word “us” here seems better replaced by “me.”

Typo: “question” should be “questions.”

Q8d. Same issue as Q4d.

The word “payback” should be two words: “pay back.”

Q12. Should the opening phrase be “When you retire” or “When you reach retirement age”? If a person reaches retirement age but is still working with a different employer, can they still get benefits from this plan?

Q12a. This is grammatically incorrect and therefore makes interpretation difficult. “At what age do you expect ...” literally means “When will you hold the expectation,” whereas the question really means to ask: “How old do you think you will be when you start receiving money from this plan?”

Q12c. The list of answer choices seems long and potentially difficult to understand and remember. Perhaps it should be presented on a show card?

Q12d. The reference to “this plan” is not clear here and should be stated more clearly.

Q13a. It’s not clear that the first sentence is needed in this question.

The phrase “while you were working at [employer name]” is not clear. It is possible that a person participated in a plan offered by [employer name] while simultaneously participating in a savings or investment plan offered by some other organization (e.g., if the person was employed by two firms simultaneously). The question could be rewritten to be clearer that it is asking about participating in plans that were offered by [employer name].

Q14. This question is posed as if there are only two possible answers, both of which are explicitly offered to the respondent, but in fact, there are at least four possible answers, all of which are offered as answer choices for the interviewer to use. Thus, the two explicitly offered choices appear to request a mutually exclusive choice between them, and respondents must infer on their own that other responses (i.e., neither, both) are acceptable. This is generally undesirable, so we recommend asking two separate questions, one about the time when the respondent left the employer, and the other about the future.

Q14a. This question presumes that the respondent took money from the plan, but some people may have been entitled to get money from the plan when they left the employer yet may not think of themselves as having “gotten” the money from the plan. In fact, offering the answer choice “haven’t received money yet/recently left job” makes it clear that respondents may not have gotten the money, so the premise of the question cannot be presumed to fit all respondents. Rather than forcing these respondents to point out that the question makes an incorrect assumption about them, it would be preferable to rewrite this question so as not to presume that respondents “got” the money. Perhaps an alternative like “What happened to the money at the time you left [EMPLOYER]” would work?

This question and many others offer interviewers a sentence to read to the respondent “if necessary,” in this case: “for example, transfer it to a different retirement account, did you cash it out, leave the money in this plan, or something else?” The words “did you” can be removed from this phrase to make the construction of the elements parallel. But more importantly, it is not clear when interviewers should read such “if necessary” phrases. If these response choices are helpful to some responses and nearly comprehensive of the answers people are likely to give, it would be preferable to offer these choices explicitly to all respondents. Likewise, “if necessary” clarifications of question meaning or intent might be best explicitly incorporated into the questions, rather than being read to only some respondents, perhaps chosen relatively arbitrarily.

The answer choices are potentially confusing. Consider a respondent who believes she rolled the money into an ordinary bank savings account. Should this be considered an “investment account,” so the interviewer would select the first answer choice? It is also not clear what “repeated payments” means.

Note that interviewers are to accept all responses that apply, but different responses have different skip instructions, so it is not clear how the interviewer should handle the selection of two options with different implications for the next skip.

Q14b. Use of the words “savings account” here again runs the risk of confusing respondents, because they are likely to think of an ordinary savings account at a bank. Furthermore, the skip pattern that brings respondents to this question seems misdesigned – the only people who seem to be asked this question are ones who answered Q14a by saying that they haven’t received the money yet, recently left the job. We suspect this is not your goal here.

Q14c. This is another example of a question that seems to offer two mutually exclusive and exhaustive choices, whereas this is not in fact so: there is at least a third unmentioned option: that the old employer transferred the money, but to someplace other than the new employer. It would be preferable to eliminate the interviewer note here and make “brokerage firm” an explicitly offered option.

Q15a and Q15b. These questions involve a logical inconsistency. Answering

“yes” to Q15a seems to suggest that the respondent kept the cash liquid for a little while or purchased something, but Q15b make it clear that respondents could have transferred the funds to another retirement account. If that happened, it seems unlikely that respondents would believe they had cash for any period of time. So respondents who transferred money to another retirement account are unlikely to say “yes” to Q15a and therefore unlikely to be asked Q15b. It would be preferable to restructure this question sequence so that respondents can report transferring money to a new retirement account without first having to have said they got cash out of the old plan.

Q16b. It is not clear when the interviewer should read “new” instead of “another,” which are shown in parentheses.

C1. It is not clear why it is desirable to begin the question with “the first week” instead of “the beginning” or to simply say “since January 1, 2004.”

The intended meaning of the word “usual” is not clear. If the goal is for the respondent to compute an average across weeks, that should be explicitly stated.

The word “the” in “the grocery store” seems awkward, since there is not only one – it would be preferable to say “grocery stores or supermarkets.”

This question seems to ask only about expenses incurred by the respondent, whereas question C3 expands the frame to include all household members. If C1 and C2 are meant to include all household members’ shopping, they should be phrased as such.

If the purpose of this question is to document all non-restaurant food purchases, it seems inappropriate to limit the question to grocery stores and supermarkets, because people buy food supplies at other vendors, such as convenience stores, drug stores, discount stores (such as Sam’s Club or Costco), and other places. It may be preferable to expand the phrasing here to be more inclusive.

C3. It seems more natural to ask “During January, 2004, did you purchase ...”, rather than “have you purchased ...”

C3a. It would be best to specify the time frame about which the respondent should report.

C4. The word “expenditure” is an unnecessarily complex and formal word, so this question would be better replaced by “On average in 2003, how much money did your household pay per month for telephone service ...”

It is not clear what is meant by “other regular charges” in the interviewer note.

Typo: In the interviewer note, “changes” should be “charges.”

C4b. This question could be reworded more simply: “Does that amount include

paying for internet service?”

C4c. This question will not work correctly for respondents who pay for internet service both through their phone bill and in another way as well (as I do). If the goal here is to get a number to subtract from the total reported telephone expense that is attributable to the internet, the question needs to more explicitly limit itself to the portion of the phone bill, as in: “On average during 2003, how much of your telephone costs for a month paid for internet service?”

C4a. This is another case where “us” should be replaced by “me.”

C5. This question does not mention “usual” or “average” or anything of the sort. It would be preferable to ask for “average” to make the question clearer and more explicit.

R1. “Within a few days” seems vague, because it could be interpreted as meaning that the respondent might learn in just one day. If you mean to say “in a few days,” it would be preferable to say a specific number of days, such as “Five days from now,” so the respondent knows just how much uncertainty he/she is avoiding.

The passive voice in “it will be determined” is awkward. It would be preferable to say “you will be told” or “you will learn.”

It seems presumptuous to say “avoid the uncertainty”, because some respondents may want to sell the asset simply to get quicker access to cash. It may be preferable to remove “avoid the uncertainty.”

The intended meaning of the jargony phrase “at its current market price” is not clear. At what current market price? What market? Can that phrase simply be removed?

The term “an asset” is jargony and would be better off replaced by a simpler and more familiar word, such as “an item” or even “something.”

R2. It might be clearer to replace “received” with “sold the asset and got”.

“percentage” could be replaced with “percent.”

It is not clear whether the interviewer should read “0 to 100” aloud because it is in parentheses – should the parentheses be removed? And should it say “from zero to one hundred”?

A potential problem with this has to do with when the interview is conducted. The closer the interview is to the end of a calendar year, the less time the respondent has to spend during the current year. This will introduce an artifactual correlation between the amount reported and the interview date that seems not to be what you want. Perhaps it could ask about “spend during the next 12 months” instead of “spend in the current

year”?

I1 – I2a. These questions are apparently intended to measure impatience, but they seem more likely to measure (1) the need for immediate cash, and (2) knowledge of the interest or increase in value that a person could earn by investing the money for a specific period of time.

I1. It may be simpler to say “can choose to wait” instead of “have the alternative of waiting.”

### Specific Observations Based on the Cognitive Pretesting

Specific observations about the questions are listed below, by question number. “R” followed by a number (e.g., “R6”) refers to a particular respondent (e.g., “R6” means Respondent #6).

Q1. Various misunderstandings of this text occurred. R6 thought that “a savings account” in the savings plan description meant an ordinary savings account at a bank earning a very low rate of interest. R3 assumed that the account balance earned a fixed rate of interest, as at a bank. R7 assumed that years of service are multiplied by salary in a formula plan.

R1 misunderstood the formula in the formula plan to be based only on salary and not on years of service. R2 defined savings plans as ones where the employee does not contribute money to the account and that only the employer contributes, whereas R8 assumed that only the employee contributes and the employer does not.

R7 assumed that only the employer puts money into a savings plan or cash balance account, not the employee.

R6 thought the formula in the formula plan was used to determine the amount of contributions made **into** a retirement account, not used to determine the size of the payments to retired recipients.

R6 said repeatedly after hearing the plan descriptions that she simply could not understand the explanations of the plans.

R2 and R8 asked for the savings plan description to be reread to them, which is an indication of comprehension difficulty. R6 and R3 asked for the cash balance plan description to be reread to them.

R5 and R6 could only remember the last sentence of the cash balance plan description and could not remember any more of it. After hearing the description of the cash balance plan, R1 and R4 could hardly remember anything of what they were told. R2 couldn’t restate any of it.

R2 asked where a 401k goes - in the savings plan category or the cash balance plan category? R3 said he/she had a 401K plan and wasn't sure whether it was a cash balance plan or not. Note that the interviewer instruction for Q4 is the first place where the questionnaire states that 401K, 403B and 457 plans are examples of savings plans.

After hearing the three plans described, R7 and R9 said they were not sure which category a 401K falls into.

R7 assumed that he could take money out of a cash balance plan early.

Q2. R9 has a 401K but said it is a cash balance plan.

Q2a. R9 answered this question by listing all of his cash balance plan balances, not just the one with his current employer.

Q2b. R9 had multiple plans, but the question asked about just one ("this retirement plan").

R9 had withdrawn money from this type of plan and had already paid it back before the interview, but she answered "yes" in order to be clear that she had already borrowed money from the plan. You might therefore want to remove this question and ask two questions instead: "Did you ever withdraw any money?" and if yes, "Have you paid it all back, or not?" and then proceed from there.

Q2c. R9 should have answered this "zero," but she reported the total amount that she originally withdrew, even though she has paid it all back.

Q2d. This question did not make sense to R9, because it asked about only a single plan, but she had multiple plans in the category.

Q3. R3 said that a 401K was a formula plan. R6 said that the amount taken out of her salary was determined by a formula, so the plan might therefore be a formula plan.

R9 was confused here, because she was not clear about which employer was meant by "this employer." R9 also was confused about whether the label "formula plan" referred here to a defined benefit plan or a defined contribution plan.

Q4. R6 answered this question "no" because the amount taken out of her paycheck was not always the same. R1 said that his/her plan was a savings plan after earlier saying it was also a formula plan. R3 has a 401k but answered this question "no."

R7 assumed that a savings plan is one where the worker determines how much goes into the account.

Q4a. R2 was confused about whether this was asking for the total in all of her

retirement plans with the current employer or only about the savings and investment plan balance. She ended up reporting the total of her 403B plus what she called her formula plan.

R3 reported the same \$27,000 twice, once here, and once earlier at Q2a, because upon reconsideration, he decided that it was properly called a savings plan, not a cash balance plan.

Q4b. The use of the word “this” is potentially confusing to respondents who have more than one savings plan with their employer.

Q8. R3 said his plan was a “defined benefit plan” that he did not contribute to but his employer did contribute to – he said he didn’t know whether this was a cash balance plan or not but eventually decided it should be categorized as such. R8 answered “yes” because the employer contributed money.

Q8a. R3 had cashed out of the plan and rolled the balance over into an IRA but answered this question by reporting the balance in the IRA.

Q8c. R9 interpreted this question to be asking for the amount of the withdrawal plus fees charged plus lost interest earnings on the money.

Q8d. R9 added into the total reported the amount of interest she would have earned had she never made the withdrawal.

Q9. R3 asked for the definition of a formula plan to be repeated, again indicating lack of comprehension.

R3 said here that his plan was BOTH a formula plan AND a cash balance plan, and he reported it as both.

R8 defined a formula plan as a plan where a percentage is contributed by the employer.

Q12. R1 was confused by the word “benefits” here, which he took to mean non-cash discounts on goods and services, such as drugs or medical care. He answered “yes” but then explained that he did so because he WOULD have been eligible for benefits if he had continued to work with this employer (but since he no longer worked there, in fact he was NOT eligible for those benefits).

R2 said she had rolled her account balance over into cash, which she has. So she wasn’t sure how to answer this question, because she’ll have the cash when she retires.

R3 answered “no” because he/she had rolled the funds over into an IRA.

Q12a. R1 reported the age at which he WOULD have taken the money out if he

had left it in the account, but in fact, he had withdrawn all the money, so there were no benefits to receive.

Q12b. R1 interpreted “benefits” as meaning not money but instead non-cash discounts on goods and services. He then answered “no,” saying that he had to pick one benefits plan many years ago and had to stick with it, so he has no choice now.

R7 said “yes” because he/she has the option to sell his/her rights to the benefits to a private company that will pay him/her a lump sum. This option is not offered by the employer, so it is not clear whether “yes” is the answer you want from this respondent here.

Q12d. R1 said he wasn’t sure what the word “balance” meant and reported the balance in the account at the end of the one year he worked with the employer, rather than the current balance.

Q13. R6 thought a savings plan included stock options.

R8 decided to change his mind and that this is the only type of plan he had and that he had misunderstood the earlier question about the formula plan.

Q13a. R3 misunderstood this question and said the total number of all types of retirement plans he participates in there, not just the savings plans he participates in.

R8 misunderstood this question and thought it was asking for the total number of plans offered by the employer to employees.

Q14a. R4 could not answer this question, because he/she didn’t understand the question. After the interviewer read the “READ IF NECESSARY” text, the respondent understood the question. Perhaps this text should always be read aloud.

Q15a. R3 and R5 answered this question “no” because they put the money directly into a mutual fund and an IRA, respectively. Is the “no” answer what is desired here? It does not seem so.

Q16a. R3 answered this question “yes” but explained that he had immediately rolled it over to a new 401K that will eventually yield benefits for him. This seems like an incorrect response due to a misunderstanding of the question.

Q16b. R3 answered “yes” but later clarified that he meant that he could contribute directly, not via any employer. This does not seem to be a desirable response. Perhaps two questions should be asked, one about whether the respondent can still contribute, and a separate question asking about how they can contribute.

C1. R8 said that he bought an unusually huge amount of food in early January because of the Big Bear closing, so he removed those expenses from his report because

he thought the question was not interested in actual expenditures during that period but rather sought a more typical or usual purchasing pattern. If the goal of that question is in fact to measure actual expenditures during a particular period, it would be best to avoid the word “usual” and ask about “average” instead.

C2. R6, R8, and R1 all misinterpreted “non-food items” to include only items that are not consumed by humans, whereas the question wording explicitly states that “alcoholic beverages” are considered non-food items. It is also not clear whether other beverages, such as juice or soda, would be considered a food item or a non-food item. This should be made more explicit.

R2 misremembered the question as asking only about paper products. R4 had a difficult time understanding this question, as far as what counts and what doesn't.

R8 reported his personal share of his household's expenses for these items, rather than reporting the whole household's, whereas other respondents reported the whole household's expenses. It would be preferable to more explicitly state whether the household's expenses are sought or just the respondent's.

C2a. R6 asked “what type?”, suggesting that this should be replaced by “non-food items.”

C3. R6 interpreted this question as seeking a report of all expenditures for food at all non-grocery stores, presumably because the meaning of the phrase “other such places” was not clear. It would be preferable to explicitly define the category of establishments of interest here, rather than to define it indirectly by offering examples. If the goal is to get the total cost of all food purchased ready-to-eat, that will cause some overlap with super market purchases for some people, so that may not be the right definition. But an alternative effective definition is not clear to us.

C3a. R7 computed an average across all weeks, instead of the most common expense amount in a week.

R9 computed spending across only 5 weekdays and left out spending for the weekend.

C5. It is not clear that asking for a monthly figure here is desirable. Many respondents made it clear that their bills are very different in the winter than in the summer, and averaging such disparate numbers may be difficult. It may be simpler to ask for the entire year's total cost. This would also help R5, who reported having very different expenses during the half of the year in which he lived in a large house and the other half of the year in which he reported living in an apartment.

R6 said that water costs were included in his/her rent, so he/she did not report any amount for water. Perhaps you want to learn that explicitly by asking people whether any of these costs are included in rent?

R9 forgot to include the cost of water.

R1. R8 thought that the asset could have a value of any amount between zero and \$10,000, rather than being worth either zero or \$10,000.

R6 and R1 misunderstood the question to be asking whether they would wait or not and said they would wait and refused to give a dollar amount. This then made it impossible to ask question R2, which requires filling in a dollar amount.

R1 misunderstood the question to say that the asset might turn out to be worth more than \$10,000.

R2 asked for the question to be reread, indicating comprehension or retention problems.

I1. R8 said that he was not sure that after a month he would definitely get the money, so this means that answers may reflect a lack of trust in the premise of the question. It may be preferable to explicitly say that the respondent will definitely get the prize if he/she waits.

### *Conclusion*

These cognitive interviews turned up a substantial number of respondent difficulties with understanding questions, retaining the details of questions in their working memories, and generating answers to questions. In addition to the cognitive difficulties created, misunderstandings were rather common, and answers lacking validity were often given. This suggests that these questions could benefit from significant rewriting and retesting.

Most importantly, it seems that clearer explanations of the various types of retirement plans can be produced, and these clearer explanations might be presented visually to respondents on a show card, so they do not have to retain the details in their working memories while generating answers to questions.

Additional repairs that seem to be called for involve rewording to increase efficiency and clarity and to avoid confusion.

## **Appendix A: Text of Columbus Dispatch Classified Advertisement**

### **EARN \$100 IN ONE HOUR**

If you are between 38 and 52 years old and have contributed to a retirement or pension plan in your current and in a previous job, Ohio State University Researchers would like to interview you on campus to learn about your experiences. All information provided will be kept strictly confidential and is for research purposes only. The interviews will last one hour or less, and you will be paid \$100 for participating. Call 614-292-3640 for details and to find out if you qualify.



-----  
**Q6c.** [READ **VERY SLOWLY**] My next question is a little long and complicated, so I'll read it slowly, and if you like, I'm happy to read it again for you. Here goes. In this study, we are interested in learning about retirement and pension plans other than Social Security. Please think about the employers that you worked for before you began your current job. Other than Social Security, did you participate in any retirement or pension plans with a previous employer?

Yes (Go to Q7)

No (End, we cannot use this respondent)

-----

**Q7.** Great. To make it easier for us to talk about these jobs, I would like to list each of these employers—either by their name or by some other phrase that you would associate with that employer.

Could you please tell me the name(s) of the employer(s) where you participated in a retirement or pension plan, even if you no longer have money in that plan.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_

**[For each employer]** Could you also please tell me the month and year when you last worked for this employer?

[INTERVIEWER NOTE: Please highlight the most recent job on the above list. We will be asking about that job during the face-to-face interview.]

-----

**[For each employer]** Could you please describe for me the pension or retirement plan you're thinking of that you participated in?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

-----  
**[IF THIS SOUNDS INAPPROPRIATE, END]**

**[IF THIS SOUNDS APPROPRIATE:]**

It sounds like you qualify for our study. I will be conducting interviews on Saturday, January 18th, and Saturday, January 25th.

Would either of those days be convenient for you to come in to be interviewed?

**ENTER DATE/TIME** \_\_\_\_\_ / \_\_\_\_\_

## **Appendix C: Think Aloud Introduction and Practice Exercise**

Before we begin, I want to mention that I will be speaking very slowly in our conversation. The reason for that, is that I will be reading you some very complicated information, and I want to make it easier for you to understand and to give you plenty of time to think about what I'm saying.

I just want you to know that this interview will be completely confidential. By this I mean that nothing from this interview will have your name on it or any other indicator that could trace it back to you. Any record of this interview will refer to you by a number only.

In this interview, I will be reading you the questions that are printed on these pages and asking you to answer each one. I will ask you one question at time, and you can answer each one out loud. To save me the trouble of having to write all your answers down, I'd like to ask whether it would be ok with you to tape record the conversation. That way, I can listen to the tape later and think about your answers. Is that ok?

At some points it might be tempting for you to want to look at the sheets I'm reading from. However, we are trying out a questionnaire that is ultimately going to be read to people who won't be able to see it. So, it would be best if you do not look at the paper I'm reading from. Also, please wait until I have completed the entire question before beginning your answer.

When you listen to each question, I'd like to ask you to do something in addition to just giving me your answer. It would be most helpful if you would think out loud in two ways. After you hear each question, first please restate the question in your own words. We want to learn about how you interpret the questions I will ask you, and one good way to do that is for us to see how you restate the ideas in the question but using different words that express the same meaning to you.

Second, we'd like to learn about how you come up with your answer to each question. To learn about how you're thinking, after you restate the meaning of each question, please say out loud as many of your thoughts as you can while you are thinking about how to answer each question.

That way, I can get a sense of how you're interpreting each question and how you decide on your answers.

To help you out, I have a simple reminder piece of paper here that I'll put on the table in front of you. It says: "1) Restate the question in your own words 2) Think out loud as you generate your answer." This is just to remind you that each time I ask you a question, I'd like to ask you please to do both of these things.

If you forget to do one or both, I'll remind you. Ok?

Because this kind of thinking aloud is probably not something you're used to doing, it might be helpful for you to get a little practice at doing it. So, let me give you an example.

Imagine that I ask you: “How many windows are there in your house?”

If I asked you this, you would first have to decide what I’m asking you to do. So let me repeat the question and ask you to restate it in your own words. “How many windows are there in your house?”

[RESPONDENT ANSWERS]

[IF R DOES NOT REPEAT VERBATIM] Great. Thanks.

[IF R REPEATS VERBATIM] Let me point something out to you. When you restated the question, you used the same words that I used. So, for example, I said “How many” and you said “How many.” I said “windows” and you said “windows.” But in order for me to understand how you interpret each question, I need you to say the question back to me using different words. So, let me repeat the question one more time and see if you can repeat it back to me in different words.

“How many windows are there in your house?”

[If R cannot/has problems with this] Let me give you an example of how I could do this. “Please count up the number of pieces of glass permanently installed in the walls, doors, or ceiling in the building in which you sleep?”

Now, if I asked you that question, and you were going to answer it, you would probably have to mentally walk through your house, picture all the windows, and count them up. And you could do that and then simply tell me the result. So you might just say “10”.

But for this interview, we really need to know all of the thoughts that go through your mind as you’re interpreting each question and coming up with your answer. It doesn’t help us very much just to know the answer without knowing how you thought about the question and how you got your answer. So just saying “10” to answer the question about windows wouldn’t help us much.

To give you some practice at thinking out loud, could you please tell me everything you’re thinking and seeing in your mind as you mentally walk through your house and count up the windows.

That was great! Thanks! Now, did that seem comfortable to you?

Do you have any questions about how to do this?

[IF BASEMENT OR ATTIC NOT MENTIONED] Do you have a basement or attic?

[IF FORGOT BASEMENT OR ATTIC] It’s natural to forget some things like the basement or attic sometimes, but I’d be really grateful if you are willing to think carefully about each question and give me accurate and complete information. There may be some cases when you

don't know the exact answer to a question. When this happens, it would be most helpful if you would tell me you're unsure and tell me what you're unsure about. Then, it would be best for you to generate your best guess of the answer and tell me about how you came up with that answer. Feel free to take as much time as you need to think about each question, and if it would be helpful to you, I can reread any question to you again if you like.

[IF R DID NOT FORGET] One last thing I want to tell you is this: It is very important that you think carefully about each question and give me accurate and complete information. There may be some cases when you don't know the exact answer to a question. When this happens, it would be most helpful if you would tell me you're unsure and tell me what you're unsure about. Then, it would be best for you to generate your best guess of the answer and tell me about how you came up with that answer. Feel free to take as much time as you need to think about each question, and if it would be helpful to you, I can reread any question to you again if you like.

Great. Now that you've got the hang of this, I'd like you to think about the questions I will ask you in the same way. After I read each question, please restate the question in your own words, and then tell me everything you're thinking as you're deciding what you answer will be. Ok?

Before we get started, do you have any [other] questions?