

Respondents' Understanding of Confidentiality Language

Eleanor R Gerber
Statistical Research Division
US Census Bureau

Key words: Confidentiality statements, cognitive interviewing, privacy, data sharing.

The aim of this paper¹ is to examine the way in which respondents understand and reason about confidentiality statements. These statements may have increasing importance in the current survey context. They are often a major way in which surveys attempt to communicate about confidentiality policy, with the intent of improving, or at least stabilizing, response rates. Four factors are identified here in respondent processing: 1. the effects of misleading associations;

2. the stimulation of doubt; 3. the effects of prior knowledge and experience; and 4. the search for evidence to support belief in confidentiality.

Background

The effect of privacy beliefs and attitudes has been studied in connection with the decennial census. Evidence suggests that privacy and confidentiality concerns have an effect on respondent behaviors. Thus, in 1990 and 2000, trust in the Census Bureau's assurance of confidentiality was a predictor census mail response in 1990 (Fay, Bates, and Moore, 1991; Singer et al. 2001). Martin (2001) found that respondents who had concerns about privacy were less likely to fill out a Census 2000 form completely and mail it back. Similarly, in Census 2000, (Singer et al. 2001), found that four factors were reliably predicted nonresponse: high privacy concerns, negative views on the Census Bureau's confidentiality practices, disapproval of data sharing, and a lack of willingness to provide SSN. These findings suggest that item nonresponse may be connected with privacy and confidentiality concerns, as well as unit nonresponse.

The effects of presenting confidentiality statements to respondents have also been studied experimentally. Singer (1978) has found that assurances of absolute confidentiality significantly decreased item nonresponse rates and resulted in better quality data for sensitive questions. However, responses to such messages are complex. Research suggests that confidentiality assurances may be counterproductive in some cases, appearing to raise rather than lower suspicion (Singer, Hippler, and Schwarz, 1992.) The sensitivity of particular questions which follow the statement may also affect the effectiveness of such statements (Frey 1986, Singer, Von Thurn and Miller, 1995) although the direction of these effects is mixed. Overall, the results of presenting confidentiality statements have been found to be mixed (Singer, Von Thurn and Miller 1995) The effects of presenting specific information legitimizing particular questions is also mixed. Junn (2000) found that, although reluctance to answer questions may be reduced by explaining the purposes and uses of the data, such explanations may also lead to an increase in item nonresponse for particular items.

These mixed effects of communications aimed at dealing with privacy and confidentiality indicate that respondents' reactions are embedded in a complex set of ideas and beliefs about confidentiality. These beliefs form the background for the trains of reasoning that respondents follow when processing a confidentiality statement. Our prior research (Gerber, 2001, Gerber et al. 2000) reports on a basic decision structure respondents seem to follow in processing requests for information.² These data indicate that responses to confidentiality are embedded in respondents' understandings about privacy in general. When faced with a request for information, respondents consider firstly who is making the request, and whether that group or agency is considered to have a legitimate right to ask the anticipated questions. If the questions do not fall into this view of what is legitimate, they will hesitate to answer or provide misleading information. They are also concerned with the consequences of

¹This paper reports the results of research and analysis undertaken by Census Bureau staff. It has undergone a more limited review than official Census Bureau publications. This report is released to inform interested parties of research and to encourage discussion. The views expressed are those of the author and not necessarily those of the U.S. Census Bureau.

²The author gratefully acknowledges the contributions of the participating ethnographers in this research. They included: Alisu Shoua-Glusberg, Betsy Strick, Susan Trencher, Bhavani Arabandi, and Melinda Crowley.

giving this data. This leads respondents into the realm of what the data will be used for, and they can be motivated to give even sensitive data if they perceive a personal or community good deriving from divulging it. They are also concerned with negative consequences that divulging the data may create. The protection of resources by being careful with identifying information (Social Security Number is the primary example) is their first concern. This research suggests that images of data sharing also affect this train of reasoning. If they believe that the data is likely to be widely shared, (as many respondents believe about all government agencies,) and feel that there may be negative consequences, they will be very unwilling to provide information. It should be noted here that for respondents privacy concerns (about the legitimate rights to collect the data) interpenetrate with confidentiality concerns (about whether the data will be shared.) It is also important that these concerns form a complex web of ideas: respondents reason from their knowledge and beliefs, and this reasoning is recreated for each information request.

This paper will examine some features of how respondents process confidentiality language presented to them in conjunction with surveys. This processing has some special characteristics. In cognitive interviews, we are usually concerned with understanding of questions. But a confidentiality statement has a different communicative purpose. It's aim is to persuade. Thus, we need to look at how respondents decide whether or not to believe the claims that are made. This process involves not only the associations that respondents have to the particular wording of the assurance, but their reactions the survey experience as a whole.

Frequently respondents are expected to make certain inferences on the basis of the bare bones of the language presented to them. For a confidentiality statement to be effective, respondents must follow a particular train of reasoning. It is arguably possible to distill what we normally present to this simple statement: we tell the respondent that we will not reveal their answers. The implicit conclusions we hope they reach are that it is safe to answer, and that therefore they *should* answer.

But respondents can fail to follow this logic. They can disbelieve the first explicit claim, which is often problematic to respondents because no evidence is presented to support it. Even if they believe the claim, they may still think that persons outside the control of the survey may somehow get access to the data, thus rendering their participation risky. If they accept the claim that it is safe to answer, they may not think the survey has any right to ask these particular questions, and reject the last implicit conclusion. There are other

possibilities: for example, respondents may not believe the first explicit claim of confidentiality, but reason that their answers won't present a danger because they are not doing anything wrong which might endanger them if the answers are revealed to third parties. The point is that respondents may follow many different logical paths in processing these statements.

In our understanding, privacy and confidentiality are conceptually different. Privacy is essentially about the rights of the questioner to the information. Confidentiality is about revealing it to third parties. Thus, in essence, confidentiality is about data handling and storage, or at least the images that respondents have of them. Although the concepts are distinct, respondents appear to process both together. Thus, the following discussion, which focuses on confidentiality language, will also involve some discussion of the beliefs about privacy held by respondents.

Methods

The current analysis taken from a set of ethnographic interviews on the subject of privacy which were fielded in conjunction with Census 2000.³ Eighty-one semi-structured interviews were carried out in this phase of the research. Respondents were primarily recruited through community groups, but we also used a small number of personal contacts. Respondents represented a number of groups, including African Americans, Asian Indians, Hispanics, Native Americans, Pacific Islanders, and Whites. Interviews were carried out in the Washington, D.C. metropolitan area, Oakland, Los Angeles, San Diego, Connecticut, Miami, and Chicago.

The interviews examined the broad context of respondents' attitudes about privacy and experiences with providing data. At the end of the interview, respondents were showed some selected confidentiality language drawn from Census Bureau programs. Because we had already discussed the respondents' attitudes toward and experiences with providing data, we are more fully able to understand their reactions and associations to the confidentiality assurances that were shown to them.

The confidentiality language we used came from a variety of Census Bureau programs. We included the

³It should be noted that this data was collected prior to the events of September 11, 2001. It is probable that some of the beliefs and sensitivities described here have undergone change in the interim.

confidentiality paragraph in the decennial census advance letter, a paragraph from a “Frequently Asked Questions” pamphlet for the American Community Survey, and several additional short phrases from other surveys. Specific language will be presented in the body of the paper.

Four Processes in Interpretation of Confidentiality Language

Four aspects of respondents’ reasoning about confidentiality language will be discussed.

- **Misleading Associations.** Respondents may not have the set of associations to a particular term anticipated by survey designers. Thus, they may fail to understand or believe the statement.
- **Stimulating worry.** Various elements of the confidentiality statement can raise doubts, or perhaps remind respondents of doubts they already have.
- **Preexisting Knowledge and Belief.** Respondents come to these statements with a strong set of attitudes about privacy and preconceived ideas about the general availability and sharing of data (both intentional and unintentional.) These beliefs influence not only their acceptance of the claims, but their interpretation of what is written.
- **Search for Evidence.** respondents appear to search for elements of statements which they can regard as evidence for the claim of confidentiality.

It is important to note that some respondents do accept written or stated claims of confidentiality, and reason in the expected manner from what we tell them. However, this paper focuses particularly on how the process may misfire. Thus, the examples given will be of confidentiality language that leads to the rejection of these claims. (It is also important to note that confidentiality is a fact in our agency. By referring to our confidentiality statements as “claims” the intent is to adopt the viewpoint of a respondent who may not share this particular knowledge.)

Misleading Associations

One problem that arose in interpreting confidentiality statements was that particular words and phrases did not carry the connotations for respondents that their authors assumed they did. Thus, they did not reason through to an acceptance of the confidentiality claim. A good example arose in conjunction with the often used phrase, “strictly confidential.” Although the phrase worked for

some, it made others think of dyadic communications in which one individual promises to keep something secret for another. For example:

“Amongst us. Like two persons in a conversation.”

When applied in the survey context, this association can have the ring of untruth, because if dyadic rules apply, only one other person should share the information. Since respondents carry an image of survey procedures and practices, they know that the information they provide cannot be kept within the interviewer-respondent dyad. The following is an example of a respondent who is thinking this way:

“You always be leery of that, because someone’s got to read it, so you know it’s not really going to be strictly confidential, a lot of people are going to see it, so you know it’s a lie.”

She knows or assumes enough about survey processes to see that there may be many people who have access to the data, and this is enough to make her “leery” and disqualify the claim of confidentiality.

Another example of misleading associations arose in conjunction with the phrase “only summary data will be published and made available.” The critical term in this phrase is “summary data,” which for some respondents had entirely verbal, and not statistical, associations. This gave them the wrong impression about the kind of data that would be released, which did not tend to lend credence to the idea of protection of identity. Here is an example:

“Not going into too much detail about everything. It’s like there might be one single point in my entire conversation, and I can talk for hours on it, so it doesn’t make sense to publish the entire hours that I talk.”

It is also perhaps problematic that such summaries are often regarded as inaccurate:

“Somebody is going to mangle my words and publish it.”

These misleading associations misfire primarily because they do not lead respondents to the train of reasoning that was intended by the authors of the confidentiality statement, but take them off in other directions.

Stimulating Worry

As has been previously noted, confidentiality statements have been demonstrated to have negative effects in certain circumstances, resulting in lower response to

specific items or increased unit nonresponse. This may be the result of the fact that certain statements appear to stimulate respondents to worry about confidentiality rather than reassure them. The next examples can be seen as a window into the cognitive processes that produce this result.

The occurrence of this process was particularly evident in reactions to the statement, “confidential by law.” This phrase is usually popular with respondents, and many take it at face value. However, for some, the whole subject of law created a certain level of anxiety. For example:

“I don’t really have a lot of confidence...I don’t know why... you’re thinking about lawyers and you’re thinking about loopholes, it makes you think somebody could get around that.”

This respondent is reminded of lawyers and thinks that where there are lawyers, there are loopholes. Others believed that laws were not necessarily upheld.

The phrase “no unauthorized person can see your form” was also worrying for some respondents. It was common for respondents to wonder, as a result of this language, exactly who the authorized persons were, which the statement did not clarify. In this quote, a similar process is evident.

“If you believe this you are very naïve... See? It tells you right there that an authorized person can see this, an agency that is authorized can see it...You have to read between the lines.”

Thus, “no unauthorized person” is turned into “an authorized person” and this is associated with “authorized agencies.” Thus, these inferences, made as the respondent puts it, by “reading between the lines,” turn the attempt to reassure into proof of the survey’s lack of confidentiality. The respondent treats the statement as a tricky notification of the intent to share data.

Preexisting Knowledge and Ideas about Data Sharing

In thinking about the confidentiality statements, respondents bring to bear all of their preexisting knowledge and belief about surveys and the handling of information that is provided in them. This can lead to rejection of confidentiality assurances, despite an accurate understanding of what the confidentiality statement is trying to convey. The principle area in which this became evident was the common belief that government agencies share data.

This belief in widespread data sharing arose in many contexts, but here it is associated with a sentence in the decennial advance letter, which informs respondents that the data is unavailable to outsiders: “no other government agency, no court of law, NO ONE.” Some respondents simply rejected the veracity of this claim, as the following respondents do, because they assume that agencies cooperate and share data:

“I don’t know about that one. Because there’s lots of government agencies that trade information...like law enforcement, INS, they’re all hooked together to help one another...”

“I don’t think it’s true...I think the Justice Department could subpoena the Census Bureau’s records. For...things not related to government purposes, yes. But from government to government, it’s open”

The belief in government data sharing is so widespread that the practice seems entirely normal to some respondents. Thus, this belief may not entirely disqualify the trustworthiness of statements that promise not to share data. They may see the promise as only applicable in certain situations, and, not meant to apply to routine data sharing. This is an example.

“[It means] that no one on the outside – I guess the government or the Federal Government is allowed to look at the information – other than them... it’s strictly confidential.”

This respondent assumes that the “NO ONE” only refers to people outside of the government, or maybe the Federal government – thus, the promised confidentiality is implicitly conditional, and the survey can still be considered “strictly confidential.”

It is interesting to note that these ideas of conditional confidentiality often rest on an acceptance of government data sharing for a purpose considered legitimate. They make it possible for a respondent to both believe and disbelieve the statement within the course of a single paragraph.

In order to properly understand some confidentiality language, respondents must have particular knowledge about survey processes or data analysis. This arose in two areas. One was knowledge of statistics, and the second was a reasonably accurate picture of data handling and storage. Thus, certain language is understood by educated or technically sophisticated respondents, but does not work for others who lack this background.

One phrase where this became evident was the claim that the respondents data would only be used for “statistical purposes.” Many respondents didn’t know what “statistics” were. Some were completely unfamiliar with the term. One thought it referred to the state you lived in. Many others could associate this word with graphs, charts and tables in a very general way, and were thus reasonably close to the denotative meaning.

The problem was that the image of charts, graphs and tables was not associated with confidentiality in their minds. The intended inference depends on an understanding that personal identifiers will be stripped out of statistical data and withheld. But this is not a necessary assumption. As this respondent sees, identifying data could be shared in other ways.

“This ensures no confidentiality to me. It just means that it’s going to be used to tally something...it doesn’t mean that the information...is held confidential in any way.”

Knowledge of how data is stored or handled may also be necessary to making the inference that confidentiality will be maintained. An example is the phrase “no one else will be able to connect your answers with your name and address.” The intent here is to convey that the data will be safe, because it will be impossible to trace back through the data files, to the individual who gave it. Some respondents understand this, and the phrase works as a assurance of confidentiality. However, if this picture is lacking, respondents could be very confused by this statement. Here are some reactions to the statement:

“Would the answers be scrambled? Or why would they not be able to connect them?”

“This is a little creepy! My name and address may be published somewhere else, and my answers somewhere else!”

The first respondent seems to assume that the only way that the data could not be connected back to her was that her answers would be scrambled in some way. The second respondent gets the idea that the answers and the identity will be separated, but makes the inference that both will be released, although separately.

The Search for Evidence

In this data, respondents seem to prefer elements of these statements which they can interpret as evidence of the truthfulness of the confidentiality statement.

The two items that had this character were the mention Title 13 in the decennial letter, and the mention of

swearing in of interviewers in a paragraph taken from American Community Survey materials. Although some respondents wanted more evidence of what was in the law or what penalties were for being forewarned, most seized on these elements as a reason to believe the assertion of confidentiality.

These are examples of respondents concluding that the mention of Title 13 and swearing in of interviewers is evidentiary.

“It explains it. If you’re paranoid at all this should take care of it...Title 13 of the US Code.”

“Is there such a law?...I think because it has a code number it must be real...”

“They’re really sworn in? Really? Sworn in, huh?...Ok, yeah, I believe this one.”

Conclusions

1. The data presented here about a selection of confidentiality statements has been intended primarily to illustrate the kinds of reasoning that respondents apply when processing confidentiality language. Confidentiality statements rely on respondents reasoning in a particular way to reach the conclusion that it is safe to provide data. Often confidentiality statements fail to have the desired effect because respondents do not respond as intended and make the appropriate inferences, even when they understand the denotative intent of the statement.

2. One important element of respondent processing of confidentiality language are the associations they have to the specific language provided. These associations may cause them to question the veracity of the statement, or may not serve to remind them of confidentiality at all.

Different associations can be cued by what seem like relatively small differences in wording. A good example of this are “strictly confidential” and “confidential by law.” The former creates images of dyadic trust, while the latter cues legal protections. Since dyadic trust can be seen as inappropriate or irrelevant in the context of surveys, this statement seemed to be relatively ineffective in providing reassurance, while “confidential by law” and mentions of Title 13 were among the most popular approaches.

3. These differential associations to confidentiality language may be part of the process which produces the “mixed” results of such reassurances found in

experimental research. Particular associations cause respondents to worry about specific aspects of the confidentiality process, or key different privacy concerns. This may help to explain why confidentiality assurances may create lower response rates to certain kinds of data. For example, language that cues worry about data sharing may cause respondents to suppress the kinds of data that they do not want another agency to possess.

4. The way in which respondents take meaning from confidentiality statements is strongly affected by the representation they have of the surveys, statistics, and the processing of survey data. Unfamiliarity with technical words or phrases can create problems for respondent understanding of confidentiality language. The best example in this data is the term “statistical,” which was not understood at all by some respondents. While others had some image of numbers or charts, this was not sufficient to cue an understanding of the confidentiality concept.

In addition, respondents apply what they know or assume about data collection, privacy, and the behavior of government agencies to the interpretation of these statements. The assumption of government data sharing is widespread, and has a significant influence on respondent processing of claims of confidentiality. This common belief may lead to the rejection of the claim of confidentiality, or may lead respondents to accept the claim in a conditional way.

5. Two of the most popular elements in these data revolve around statements which are taken as “evidence” supporting the claim of confidentiality. Such “evidence” serves to add previously unknown information to the respondents’ representation of the survey process. Providing this sort of “evidence” may be a fruitful strategy for framing confidentiality language. The problem which arises with such evidentiary language is that it is not possible to explain enough in a short statement for some respondents to feel that they understand it.

6. In general, this close examination of the way that respondents process confidentiality language demonstrates how difficult it is to craft really effective statements. Almost every element of each of these statements is problematic to someone. A long statement may provide enough information to reassure some, but will seem wordy and bureaucratic to others. Particular items will be reassuring to some and cue worry for others. Respondents want evidence of why they should believe the statement, but enough information could never be provided to satisfy everyone. Even carefully

crafted language will be misinterpreted in accordance with respondents’ prior beliefs. Respondents reason further than intended (sometimes turning around the intent of the statement) or don’t reason far enough to recognize the confidentiality implications of the language provided. These significant problems suggest that additional research into the way that respondents process confidentiality language is necessary before specific recommendations are appropriate.

7. In general, cognitive interviews have stressed understanding the way that respondents arrive at an interpretation of denotative meaning. However, as this data indicates, respondents may understand the words, but reject the intended inference that the data will be kept confidential. This indicates that the acceptance of the confidentiality statement may rest on processing that takes place subsequent to the processing of meaning. The importance of associations to confidentiality language and the widespread comparison of the statements to preexisting beliefs about government data sharing are the most critical parts of this subsequent processing. Therefore, pretesting of confidentiality statements should include respondents’ inferences and reasoning, in order to assess the persuasive character of the statement.

References

- Fay, R., Bates, N. and Moore, J. 1991. "Lower Mail Response in the 1990 Census: A Preliminary Interpretation." In *Proceedings of the Annual Research Conference*. Washington, D.C.: Bureau of the Census.
- Finegan, E. and Besnier, N. (1989) *“Language: It’s Structure and Uses”* New York: Harcourt Brace Jovanovich
- Gerber, E. (1999) “The View from Anthropology: Ethnography and the Cognitive Interview” In Sirken, Herrmann, Schecter, Schwarz, Tanur, and Tourangeau, eds, *Cognition and Survey Research*, New York: Wiley, pp 217 - 234
- Gerber, E. (2001) “The Privacy Context of Survey Response: An Ethnographic Account” In Doyle, Lane, Theeuwes, and Zayatz, eds. “Confidentiality, Disclosure and Data Access: Theory and Practical Applications for Statistical Agencies.” New York: North Holland, pp 371 - 394.
- Gerber, E. (2002). *Privacy Schemas and Data Collection: An Ethnographic Account*. Census 2000 Testing and Experimentation Program Report.

Junn, J. (2000) "The influence of negative political rhetoric: An experimental manipulation of Census 2000 participation." Paper presented at the annual meeting of the Midwest Political Science Association, April 21, 2000.

Martin, E. (2001). Privacy concerns and the census long form: Some evidence from Census 2000. 2001 Proceedings of the American Statistical Association, Statistical Computing Section [CD-ROM], Alexandria, VA: American Statistical Association.

Singer, E. (1978) "Informed Consent: Consequences for Response Rate and Response Quality." *American Sociological Review* 43(2): 144-162.

Singer, E., Hippler, H.J., and Schwarz, N. (1992) "Confidentiality Assurances in Surveys: Reassurance or Threat?" *International Journal of Public Opinion Research* 4(3): 256-268.

Singer, E., Mathiowetz, N. A., and Couper, M. P. (1993) "The Impact of Privacy and Confidentiality Concerns on Survey Participation: The Case of the 1990 U.S. Census." *Public Opinion Quarterly* 57(4): 465-482.

Singer, E., Von Thurn, D. R., Miller, E. R. (1995) "Confidentiality Assurances and Response: A Quantitative Review of the Experimental Literature." *Public Opinion Quarterly* 59(1):66-77.