THE DETERMINANTS OF ACQUIESCENCE TO PREPRINTED INFORMATION ON ESTABLISHMENT SURVEY INSTRUMENTS

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To minimize informant burden and to increase response rates, public and private administrators are often sent survey forms with previously provided information on preprinted forms. Informants then merely need to review the preprinted information and correct the information as necessary. However, informants often tend to acquiesce to the information without first reviewing the information and verifying if indeed the information is correct or not. Consequently, establishment information obtained from surveys using preprinted responses is often inaccurate, out-of-date, or biased.

This paper presents the results of a study where the determinants of such biases were examined. The study was designed to elicit facility and inventory information from a population of public and private recreation administrators in the State of Illinois. The findings suggest that the likelihood of an informant acquiescing to preprinted incorrect information was dependant on factors such as the number of facilities or sites the administrator managed, the magnitude of the difference between the response from a previous survey and the preprinted response provided on the present form, and selected characteristics of the informants.

METHOD

In order to study the effect of preprinting information it was decided that three kinds of survey instruments would be sent to three groups of informants. Since this 1991 study was conducted as a follow-up to a previous survey conducted in 1986, those informants who did not participate in the earlier study were sent blank forms (blank form condition). The informants who had responded to the earlier study were randomly assigned to one of two preprint groups. Those informants assigned to the first condition were mailed surveys which had the information from the previous study preprinted on the survey instruments (previous information condition). Informants assigned to the second condition received forms where the information for a selected set of variables was intentionally misprinted with variable's median value from the previous survey (misprint condition).

RESULTS

Survey Response Rates

A total of 1,332 facility managers who were previous informants were sent 3,823 surveys. Each manager was asked to complete one survey for each park site under his or her authority. The average facility manager oversaw 2.4 park sites however, the number of sites managed by a single manager ranged from one to 53. A total of 545 (40.9%) managers returned completed surveys on 1,855 (48.5%) park sites. It is important to note that these informants represent management agencies of sites that were included in the 1986 survey.

In the blank form condition, 580 managers were asked to complete surveys on 1,278 park sites. 232 (40.0%) of these managers returned completed surveys for 452 (35.4%) of the park sites. The preprint group included two possibilities. First, were management agencies who received forms where a set of variables were preprinted with the information from the previous survey. Second, were management agencies who received forms where some of the variables were preprinted with an error value equal to the median value from the 1986 survey. A small group of previous informants whose past information happened to be equal to the median value were excluded from the preprint group. In the preprint group, 986 management agency managers were sent 2,491 surveys with either answers from their previous survey or the error value preprinted on the survey instrument. 476 (48.3%) of these management agencies returned completed surveys for 1,236 (49.6%) sites. Eventually, the data was cleaned to remove unusable responses resulting in a total of 478 surveys that were used for the analysis of the acquiescence determinants for the acreage variable in the misprint condition.

Analysis

Although values for several variables were provided on the survey instrument for both the previous information and the misprint condition, only one variable, area acreage, will be examined in this

analysis. Overall, about half (51%) of the informants in the misprint condition caught and corrected the error on the 244 "misprint" surveys that were returned. Amongst them, 27% indicated a negative change, 33.8% indicated a zero change, and 33.2% indicated a positive change. This suggests that for key variables such as the acreage of a facility, preprinting an erroneous value leads to acquiescence in about half of the cases.

While this indicates that there is a tendency to agree with the information that is provided on the forms it is also important to examine the way in which these biases are influenced by variables that pertain to the specific informant. As suggested earlier there were two key determinants to this bias -- (1) the number of sites managed by the administrator, and therefore, informant burden, since each administrator was asked to complete one survey per site; and (2) the magnitude of the difference between the misprinted value and the value reported in the 1986 survey. The responses to area size were crosstabulated by these two variables and chi-squared statistics were calculated to test if indeed there was a significant difference between the groups. This is the first phase of the analysis and it is expected that logistic regression models can be fit to assess the extent to which these variables determine the acquiescence to preprinted items while controlling for other factors.

Acquiescence Due to Informant Burden

There were five different groups of informants depending on the number of sites they managed. It was observed that administrators who were responsible for twelve to twenty sites were most likely to catch the misprint and change the erroneous preprinted information. This group represents 31% of the surveys where the informants did not acquiesce to the misprinted information. On the other hand, those who managed a single site were the ones who acquiesced to the information most often, with a quarter of the informants agreeing to the misprinted information belonging to this group. The differences between the groups were also significant as determined by the chi-squared statistic (X^2 = 28.38, 4 *df*, $p < 0.01$). These results are illustrated in Figure 1.

Acquiescence Due to Magnitude of Preprinted Error

A second variable that was assumed to determine the acquiescence was the magnitude of the difference between the misprinted value and the value reported in the 1986 study. Since the median area acreage was preprinted it was possible to crosstabulate the magnitude of the error by the whether the informant had caught the error or acquiesced to the misprinted value. The magnitude of the difference between the misprinted value and the 1986 value was as large as 21.6 acres in the negative direction, while the magnitude of the difference in the positive direction exceeded 7.5 acres. These differences were determined by comparing the acreage reported in the 1986 study with the misprinted value. These differences were recoded into five groups: high negative difference, medium negative difference, minimal difference, medium positive difference, and high positive difference.

Acquiescence was high when the misprinted value was close to the acreage reported in 1986 or was larger than this value. An equal amount of the 23% of the informants who agreed with the information were in the group where the misprinted value was either close or higher. On the other hand, when the misprinted value was far below the acreage reported in the 1986 study, acquiescence was lower with 27% of the non-agreeing informants belonging to the group where the misprinted value was far lower than the 1986 value. The chi-squared statistic indicates that the differences between these groups are indeed significant (X^2 = 14.77, 4 *df*, $p < 0.01$). These results are illustrated in Figure 2.

DISCUSSION

These results suggest several important provisional conclusions and directions for future work.

First it is possible to claim that preprinting increases the tendency to acquiesce with the information on the preprinted survey instrument. Even when the preprinted information is incorrect nearly half the informants indicate no change to the misprinted information. Consequently, it is important to study the effects of preprinting on populations such as these where the informants are already burdened with enough managerial responsibilities and would be tempted to agree with the information on the survey forms. Yet, as shown in earlier work (Lakner, Knaap, and Mitra 1993), preprinting tends to increase the response rate, with nearly half of the informants returning the preprinted forms compared with only 35% of the informants who returned completed surveys in the blank form condition where the informant burden was greater. There is thus a tension between increasing response rate, and the introduction acquiescence bias into the data set.

This introduces the next important conclusion that can be drawn from this study. The tendency to

acquiesce is dependant on several factors, and by determining their relative contribution towards acquiescence it is possible to design better instruments, reduce the tendency to acquiesce, and increase the response rate as well. This study suggests that the tendency to agree could depend on the responsibility of the informant represented by the number of sites the informant is expected to report about. The tendency to agree with the information is also dependant on the extent of the difference between the preprinted information and the actual value of the variable. This is particularly important since informants who received forms preprinted with the previous study information often tended to simply agree with it. On the other hand, those who received forms with grossly different values noticed the difference and made the necessary corrections.

Several questions arise out of these findings. What are the determinants to acquiescence? When agreeing with existing information can be expected,what steps need to be taken to ensure that changes to existing information are correctly recorded? And finally, determining the optimal balance between increasing the response rate and introducing acquiescence bias, and at what costs? Some of the answers lie in further analysis of the data set, while other answers can be obtained by continuing similar experiments with different kinds of informants and populations.

REFERENCES

Lakner, E., Knaap, G., & Mitra, A. (1993), "Validation of Information Reported in a Longitudinal Mail Survey: The Use of Computer-generated Survey Forms to Reduce Respondent Burden," paper presented at the American Association for Public Opinion Research Conference, St. Charles, IL.

FIGURES

Figure 1: Percent Acquiescing by Number of Sites

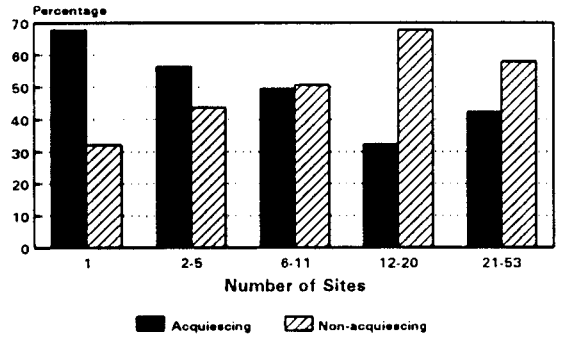

Figure 2: Percent Acquiescing by Magnitude of Difference