DISCUSSION

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The papers in this session cluster into two major topics—respondent cooperation as measured by response rates and willingness to report accurately and the use of randomized response procedures to protect respondent confidentiality when questions are sensitive.

The first paper by Hubbard et. al. highlights the crucial role of respondent availability as a factor in determining cooperation. Although there were slight differences in the refusal rates between different programs, the major cause of differential cooperation between programs was the differential availability of program participants for interviewing. This corresponds directly to household interviewing where the chief current cause of non-cooperation is similarly the non-availability of respondents. That is, much of the decrease in cooperation that is observed in surveys conducted currently as compared to those conducted two decades ago is caused by the increase in the number of women in the labor force and the corresponding increase in the difficulty of finding a respondent at home. The non-availability of respondents in households makes it difficult to suggest any major improvements in surveys conducted at program sites. If one chose to shift from program sites to households as locations for interviewing program participants, location problems would continue to be severe. Many participants in drug programs either move frequently or have no permanent address. Even if an address is available, such respondents are difficult to find at home. A mixed mode strategy of interviewing at the program site and supplementing with a household sample would be most complete, but also most costly.

One other reason for conducting household interviews is that there may be a tendency on the site to give more favorable responses about the program. Such site biases have been observed in surveys of employee attitudes toward their jobs, but data on program evaluations are limited.

Most closely related to the previous paper is the paper by Keppel on the use of consent statements in mail surveys of natality and fetal mortality. His comforting finding that asking for a consent form at the end of the questionnaire does not reduce cooperation confirms that of other researchers. Even though this study was conducted by NCHS, cooperation by both physicians and hospitals was significantly increased by using the consent forms. Consent forms are even more likely to be required or to be necessary for adequate record data in the future. Fortunately, this is a situation where there is no conflict between respondent rights and the quality of the survey results.

Cooperation appears to be a problem only with mothers of children born out of wedlock. This might be explained by the threatening nature of the survey to these respondents or more directly by the relatively lower levels of education of unwed mothers. Mail questionnaires are an inappropriate data collection procedure for this group. The solution adopted by NCHS is to exclude children born out of wedlock from the main study. Another, but more costly solution, would

be to conduct face-to-face interviews with unwed mothers.

The paper by Berry and Miller introduces two new variations to the work of Cannell and his colleagues. The earlier research demonstrated the improvement of response accuracy to health behavioral questions by use of commitment, instructions and programmed feedback in face-to-face interviews. This new research attempts to extend this research to telephone interviews and also to non-behavioral questions.

The results for the health behavioral questions on the telephone generally confirm earlier findings of improved response except that feedback has no significant additional effect. These results are, as the authors point out, surprising and more research is needed on feedback. One possible explanation for a lack of a separate feedback effect is that interviewers in the non-programmed feedback cases might have adopted the same kinds of feedback procedures that were programmed. This could be determined by listening to interviews.

The experimental procedures did not improve reporting of alcoholic beverages. This suggests that the Cannell procedures are not effective as the questions become more threatening and issues of social desirability become more important than simply memory errors. In this case, changes in question format have been shown effective. Thus, the use of long open questions produced much higher levels of reporting than did short closed questions in work conducted by Bradburn, Sudman et. al.

The final series of questions in this research dealt with attitudes toward television. The authors hypothesized that there would be differences in attitudes between the experimental and control conditions, but, overall, the observed differences in their Table 2 do not support this hypothesis. The authors do find some weak support for this hypothesis for women respondents for "police and crime" programs and "sexy" shows, but it is not evident why only women should be affected by the experimental treatment and why only these kinds of programs.

It is possible that new instruction and commitment procedures, especially adopted for attitudinal questions, could affect responses to such questions and continuing research is justified. The use of exactly the same procedures as are used for behavioral questions, however, would not appear to be very promising, based on the results of this study.

The paper by Tracy and Fox is an impressive addition to the literature on the use of randomized response techniques for asking threatening questions. Earlier papers discussed both the reduction in response error resulting from the use of randomized response procedures and the increase in sampling variances, but did not quantify these effects fully. In this paper, both effects are quantified and the net mean square error is estimated. The data indicate that randomized response procedures are superior except for small sample sizes. These procedures can be generalized for use in a variety of situations,

although the effect on mean square error depends, of course, on the reduction in bias, which will vary depending on topic of the study.

While the randomized response methods did reduce bias in this study, this effect was centered on respondents who had been arrested two or more times. The method used here did not reduce, and actually increased, bias for respondents who had been arrested only once. For this group, it is likely that a randomized response procedure that simply asked a yes-no question such as "Have you ever been arrested?" would have been more satisfactory. It appears that different randomized response procedures are optimum depending on whether one wishes to determine if the respondent has ever engaged in a threatening behavior or how many times the behavior has occurred.

The final paper by Rosenberg is an interesting example of the use of contamination models to protect respondent confidentiality. At this stage, such models are similar to randomized response models in their early stages of development. It has now been demonstrated that such procedures are workable. The Rosenberg examples demonstrate that it is possible to retrieve categorical data after contamination. The examples also indicate, however, that there is a substantial loss of power resulting from contamination. The next stage in research on such models will be to measure this loss of power which corresponds to increased sampling variance in randomized response models. It will then be possible to evaluate alternative contamination procedures and to select the one that causes the lowest reduction in power. A more difficult task will be to measure the benefits from these methods. These benefits depend on the sensitvity of the data as well as the probabilities of individuals being identified. Undoubtably, there will be situations where the confidentiality benefits will substantially exceed the loss of power. As with randomized response, however, the appropriate situations for use of contamination will continue to be rare.