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The work by Locander, Sudman and Bradburn represents an interesting and provacative investigation in an area of survey methodology needing more intensive research. I recall a statement made by W. E. Deming many years ago which I paraphrase as closely as possible: "Much research time and effort has gone into the development of methods by which sampling error may be reduced or minimized; however, I am convinced that nonsampling errors (response and nonresponse errors) make up the larger part of the total error incurred in most sample surveys." This paper bears directly on the problem of nonsampling errors, since it considers the effects of question threat and method of administration on response distortion.

It was surprising that the telephone achieved a response rate so much higher than the personal interview. This may have been due to difficulty in "getting in the door" on the personal interviews. Regarding the self-administered technique, I am not sure how level of education may have influenced response rate. It is probable that this differential results from more basic psychological characteristics of the subgroups.

For the methods other than randomized response, it would be interesting to consider the empirical distribution of the response errors, that is, of the persons possessing the characteristic, the proportion who reported they did not, and alternatively, of the persons not possessing the characteristic, the proportion who reported that they did.

We note that the questions were reordered on the threat dimension on the basis of the distortion estimates. For the library and voting items, it is difficult to assess the degree to which errors in the validation procedure may have influenced these distortion estimates. Also, the authors seem to imply that response errors, as they relate to the threat dimension, are conscious and willful errors by the respondent. However, there is evidence that on questions regarding voting behavior, errors may be related more to recall and memory, that is, nonwillful errors. One might hypothesize that degree of recall is related to the threat dimension. For instance, a respondent might incorrectly recall and report voting behavior, but one is not likely to forget a drunken driving citation.

The randomized response technique seems to have been well received, as measured by the interviewer's evaluation of the respondent's reaction. It would have been interesting to have asked questions of the respondent using the randomized response technique itself; it is conceivable that these questions may be, in some cases, rather high on the threat dimension. It would also be informative to know the interviewer's reaction to the use of the technique.

I would like to make a few comments on our experiences with various interviewing methods at the Statistical Laboratory, Iowa State University. We have continued to rely upon face-to-face personal interview as the primary method for data collection. On occasion, we have used the telephone, primarily on reinterviews and on surveys where respondents have been screened on certain characteristics for further interview. As compared to the face-to-face method, the costs associated with such telephone interviews have generally been about half as large, and there has been little difference in response rates. I mention two problems associated with the telephone method: 1) the difficulty of obtaining an accurate and usable frame for sample selection, and 2) the restriction upon length and complexity of the questionnaire.

We have not utilized the methods of selfadministration or of randomized response. Selfadministration does eliminate potential bias due to interviewer-respondent interaction; however, for attitudinal questions relating to a specific person, there is a real hazard of confounding this individual's responses with those of other members of the household or family. We hope to experiment with the randomized response method in the future, although our reservations are 1) the possibility of an adverse respondent reaction, and 2) the difficulties encountered in performing multivariate data analysis, such as regression, with randomized responses. Nevertheless, we realize that, for certain very sensitive questions, one may be willing to (and should) forego such reservations in order to decrease response bias.

On a survey of farm operators in western Iowa, we are currently tape-recording face-toface interviews. This study employs a somewhat difficult questionnaire which attempts to assess a farmer's reaction to alternative soil and water conservation plans for his farm. In the pretest, we found that respondents had no negative reaction to the method and displayed little reluctance to the use of the recorder. It remains to be seen how effective the method will be in this particular instance. We foresee some difficulty in the coding of the responses.

Regarding the subject of response errors, we have found that they may be sizable, depending upon the type of questions and the length of time reference. In a recent study of response error and interviewer effect with a survey of farm operators, utilizing a reinterview procedure, respondent response variances for certain questions were as high as 56 percent of the total variation. Of the 21 characteristics tested, eight had respondent response variances in excess of 25 percent of the total variance. Interviewer effects were a negligible portion of total variation.

For the more sensitive questions, we suspect that the response errors may be related to the facility of the interviewers. Less experienced interviewers may be reluctant to ask these types of questions, thus incurring a higher response error and a higher refusal rate.