

RESPONDENT BURDEN

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As the number and complexity of sample surveys increases, concern for the burden that such surveys place on respondents has also increased. Perhaps the most noticeable manifestation of this concern has been the Paperwork Commission, which was specifically set up to find ways to reduce the amount of forms that citizens have to fill out. During their deliberations, an attempt was made to reduce the amount of forms by 10 percent. The consequences of this across the board reduction fell disproportionately on sample surveys undertaken for research and evaluation purposes, although they constitute a relatively small part of the paperwork required of citizens by the federal government. While there was consternation among practitioners of survey research during the reduction, the net effect of the Commission's activities has been to increase our concern for the potential burden we may be placing on respondents when we undertake surveys. I am less sure that it has in fact reduced the amount of paperwork.

I am tempted to start by saying that the concept of "respondent burden" is like that of "the weather": everyone talks about it, but no one does anything about it. But this is an overstatement on both sides. If we mean by "talking about it," doing some research or writing about respondent burden, it can hardly be said that everyone or even very many are doing anything about it. I know of only one study (and that is still in the proposal stage) by Laure Sharp of the Bureau of Social Science Research which will be directly and specifically focused on respondent burden. Searches of relevant abstracts and other indexing systems do not show respondent burden as a category that is used to organize methodological studies. There is some research on response rates in which length or difficulty of the questionnaire are variables, but investigations of respondent burden seems to be indirect at best.

On the other hand, it would be unfair to suggest that no one does anything about it, since survey research professionals are concerned with the completeness and accuracy of their data. Since they must depend on the cooperation of respondents to obtain complete and accurate data, they must always be sensitive to those factors that might decrease cooperation. On the whole they are vigilant about things that might make respondents feel imposed upon or feel that the survey is in some way burdensome. Indeed, I would argue that it is because of their day-to-day concern for the potential burden that they place on

respondents that there is little self-conscious research on the issue. It is so much a part of everyday practice, that it is not seen as a topic in need of research.

If "respondent burden" is not a developed concept in the research literature, what can we say about it? Let me start by describing my general way of thinking about survey research interviews so that we will have a way of thinking about the problem of respondent burden that can relate to other aspects of survey research. We begin with the notion that the research interview is a two-role social system governed by general norms about the behavior of the actors. The two roles are that of respondent and interviewer. The roles are joined by the common task of giving and obtaining information. In the most general sense, the quality of the data is the criterion by which to judge how effectively the task has been carried out.

The interview is a social encounter. It is not immune from general norms that prevail when people voluntarily participate in social events. The researcher is asking the respondent to provide information. We must pay attention to what motivates respondents to participate in an interview and to what we, as researchers, can do to increase or decrease that motivation, particularly the motivation to perform the respondent role well. In general, we stress contribution to knowledge and/or civic duty as reasons for participating in research. Such reasons appear to be fairly powerful ones as evidenced by the relatively high cooperation rates for serious studies.

But the interview may also be an enjoyable social event in its own right when conducted by trained interviewers who can put respondents at their ease and listen to them sympathetically. E. Noelle-Neumann (1976) has pointed out the importance of proper questionnaire construction for motivating the respondent to participate actively in the interview and to make the effort to give accurate data. Some questionnaires may be boring or tedious, and attention should be given in the design of questionnaires to creating an interesting and enjoyable experience for the respondents. In particular, the researcher's desire to get extra data fairly cheaply should not be allowed to add so much to a questionnaire that it puts off respondents and reduces their willingness to participate fully in the research enterprise. If the task is not to be perceived as a burdensome one, attention must be paid to the needs of the

respondent, as well as, to those of the researcher.

Since it is the task that defines the relationship between the actors in the research interview, the notion of respondent burden is most naturally related to variations in the nature of this task. As the task becomes more difficult, *ceterus paribus*, the burden on the respondent increases. On the other hand, since the task is defined as obtaining information from the respondent and the demand characteristics of the situation (Orne, 1969) are such as to require the respondents to give accurate information if they are to be good respondents, more difficult tasks may be interpreted as more challenging and interesting and subjectively perceived as less burdensome. In discussing the variables that we tend to think of in connection with respondent burden, we should consider the conditions under which a particular type of task may be viewed as more or less burdensome. "Burdensomeness" is not an objective characteristic of the task, but is the product of an interaction between the nature of the task and the way in which it is perceived by the respondent.

In considering variables related to respondent burden, I shall divide the discussion into four main headings: 1) the length of the interview; 2) the amount of effort required of the respondent; 3) the amount of stress on the respondent; and 4) the frequency with which the respondent is interviewed.

1. Length. Interviews and questionnaires differ greatly in their length as measured by the number of questions, number of words per question, number of pages or other measures of bulk and total length of time to complete the interview. Most investigators think of total length of time to complete the interview or questionnaire as the measure of length. It is typically this figure that is told to respondents when their cooperation is solicited. Interviews may run from a few minutes to three hours or more. While I know of no data on the distribution of the length of interviews in the survey field, my guess is that the mean is around one hour with a standard deviation of about fifteen minutes. The tail on the upper end is probably quite long. Of course, if one considers repeated interviews, the total length of time given by the respondent can be much greater. A current longitudinal study of medical care expenditures conducted for the National Center for Health Statistics requires more than ten hours of interview time per respondent, although the time is distributed over more than a year.

There is no simple relationship between length of an individual interview and data quality. Within the range of forty-five minutes to one and one-half hours, there does not appear to be a clear effect either on response rates or breakoffs, although systematic evidence on the matter is not easy to come by. Nor is there any belief that even substantially shorter interviews have a better completion rate. The experienced field workers I have spoken with believe that while length *per se* does not have much to do with completion rates, at least within these ranges, the longer the interview schedule, the more difficult it is to achieve a high completion rate; that is length does have some relation to effort, and thus to costs, in getting a high completion rate.

Bradburn and Mason (1964) failed to find any position effects on sections of a fairly long (average 1.25 hour) interview schedule. When sections of the schedule were systematically rotated, those that appeared near the end of the interview did not show any effects of respondent fatigue or less willingness to cooperate. There is some evidence from Noelle-Neuman (1976), however, that use of filtered questions may affect responses to single items. She provides some data indicating that following up a particular response with another question, e.g., "If yes: In what way?", may reduce the number of people who will say "yes" or give any opinion at all. It is not clear whether this effect is produced by the respondents' desire to avoid the follow-up question (and thus reduce the burden of answering) or by the interviewer's cluing respondents that answering a particular way will prolong the interview.

There is a general feeling that telephone interviewing imposes greater time limitations on the interview than does personal contact. The evidence for this belief, however, is not great. At a 1976 Airlie House conference (NCHSR, 1977), the consensus of the participants was that telephone interviews up to an average of one hour were quite possible without adverse effects on data quality. I am not sure that there is much experience with longer telephone interviews, but it is not immediately clear that longer ones are out of the question. It does seem likely that longer telephone interviews will need careful scheduling with respondents so that they are not inconvenienced by tying up their telephones for a long time. Here again a longer interview that was perceived by respondents as very important could very well result in a high co-operation rate. I expect that it would take a higher level of justification to get respondent co-operation.

Intuitively one would expect that the strongest relationship between length (at least apparent length) and response rate would be with self-administered questionnaires. I have heard several researchers maintain with great conviction that it is extremely important to make self-administered questionnaires, not only short, but also to appear to be short. Operationally, this advice leads to reducing the number of pages in the questionnaire to an absolute minimum, even at the cost of crowding more onto a single page. Two studies (Champion and Sear, 1969; Sheth and Roscoe, 1975), however, provide evidence that there is no significant difference in response rate between short and long questionnaires, at least within the range of three to nine pages. Dillman (1977) reports that mail questionnaires greater than twelve pages get much lower response rates.

Even though length did not affect completion rates on a particular study, it might have an effect on follow-up studies with the same respondents. It is difficult to come up with any good evidence one way or the other since most investigators who are planning longitudinal studies worry about the follow-up rates and adjust their data collection aspirations with such rates in mind. There is at least anecdotal evidence from one NORC study in which the original interviews were up to three hours in length. A ten-year follow-up study was conducted with a subsample of the respondents. The length of initial interview was still remembered by many respondents and may have played a role in some refusals for the follow-up study.

On the other hand, the Consumer Expenditure Survey which is a very long questionnaire with repeated interviews has a high completion rate (90 percent) and few respondents complain about the survey when reinterviewed. Respondents may be interviewed for two or more hours, five times a year. The survey covers detailed expenditures about sometimes unreasonable items (e.g., asking poor or elderly respondents about purchases of airplanes or snowmobiles) and asks respondents to refer to records and to prepare themselves for the follow-up interviews. The survey, however, is used to form the basis of the cost of living index which has significant income implications for large numbers of people. Both interviewers and respondents may consciously or unconsciously use this information to justify the expenditure of so much effort.

In sum, there is no clear evidence that interview length is in itself an important contribution to response rate, although it may have some impact on item

response. But we should also consider the other side of the coin. Ordinarily, when we are in a position to afford longer interviews, it is because the study has been judged of sufficient importance to justify a bigger budget. Whatever it is about the study that contributed to the judgment of importance may also work on the researchers and interviewers to increase their efforts to insure high completion rates and to influence the respondents so that they are willing to make a greater effort to contribute to the study. If length is correlated with importance and importance is correlated with higher completion rates, we might even find a mild positive correlation between length and response rate.

2. Respondent effort. As with length, the amount of effort required of the respondent in answering questions in a survey differs considerably. Respondents may be asked their opinion on matters with which they are familiar and to which they can respond without much thought. On the other hand, they may be asked for complicated and detailed information about finances (e.g., Housing Allowance Supply Experiment) or expenditures (e.g., Consumer Expenditure Study, Medical Care Cost Study). They may be asked to assemble records in their own homes or they may be asked to come into a central testing site to take tests or submit to a medical examination. To some extent differences in effort are correlated with length, but it is possible to have long interviews that do not require any greater effort on the part of the respondent than a short interview, other than that entailed by the greater number of questions themselves. Since it takes time to assemble records or to go to a central examining location, it is almost always the case that studies requiring great effort on the part of the respondent will also take more time. I know of no studies that try to sort out the effects of total time from those of effort.

The use of records has complicated effects on the level and accuracy of reporting (see Sudman and Bradburn, 1974, Chapter 3) and, properly used, can improve overall data quality. As with the case of length, the request to use records may indicate the greater importance attached to the study and thus emphasize the demand characteristics for "good" respondents to co-operate and provide the most accurate data they can. I do not know of any evidence that asking the respondent to go to greater trouble in the form of consulting his records leads to a lower completion rate.

Effort, as measured by coming into a central examining station, is also an important variable. High completion

rates have been obtained even under conditions requiring respondents to make considerable expenditures of time and effort to come to an examining location, as for example with the National Health Examination Survey (HES) which requires respondents to come to a mobile testing station and undergo an extensive physical examination. Response rates on this study were high (between 87 and 96 percent) on the first three cycles.

In 1971, however, when the HES was expanded to include responsibility for measuring and monitoring the nutritional status of the U.S. population, the response rate dropped to around 64 percent (NCHS, 1975). It is not clear what factors were responsible for this drop. One hypothesis is that the addition of the nutritional portion of the survey lowered the appeal of the study to the respondents, either because the study was now longer and/or because nutrition is deemed less important. The effect of the change in the HES could partially be offset by respondent remuneration, but it may be that some sort of threshold of effort has been reached that began to have a serious effect on response rate.

From the fragmentary evidence, I would conclude that when greater effort is required by the respondent, particularly when it means going to some special location for testing, response rates may suffer somewhat and greater efforts on the part of the researchers will be needed to insure high completion rates. On the other hand, data quality may increase. Again, as with length, if respondents perceive the study as particularly important, they may be willing to expend greater effort and perform the role of a good respondent.

3. Respondent stress. By respondent stress, I mean the amount of personal discomfort that a respondent undergoes during the course of the interview. Such discomfort may arise from the content of the questions, such as might result from embarrassing or ego-threatening questions or from those that might provoke emotionally laden responses, or from other activities such as mental or physical tests that might be part of the data collection operation. Other things being equal, one might expect that greater respondent stress would be associated with lower completion rates and/or lower validity of data.

The relationship between stress and completion rates is difficult to determine. It is difficult to know how much respondents are warned in advance about the potentially stressful nature of the material or, even when there are efforts to explain more fully the nature of the interview, how much the respondent

actually takes in of what he is being told. With the increased concern for a workable definition of informed consent, some experimental work has been conducted to determine empirically the effects of differing levels of initial explanation about the content of interviews. Since most refusals occur before the respondents know what the survey is about, the problem seems to be more one of "informed refusal" than informed consent (see Singer, 1978).

Johnson and Delamater (1976) report on a study undertaken for the Commission on Obscenity and Pornography and on several experiments they conducted on response effects in sex surveys. They conclude that there is some differential effect on completion rates within demographic groups, but that co-operation is not obviously more problematic in sex surveys than in surveys on other topics.

Even if it were true that the sensitivity of topics had little effect on response rates, either for the interview as a whole or for specific questions, it still might be the case that respondents evade stressful questions by underreporting. Underreporting may be particularly likely for topics that have many subsidiary questions filtered through a general question of the type: "Have you ever done X?" If respondents deny ever having done X, they then avoid a whole series of questions about frequency, amount, dates, etc. In a recent methodological experiment, we have evidence that suggests some evasion of response is true for those respondents who find particular topics anxiety provoking (Bradburn, Sudman, Blair and Stocking, 1978). There are more ways to evade a question than outright refusal. Even with complete anonymity, as with the random response technique, we know that there is still substantial underreporting of threatening events (Locander, Sudman, and Bradburn, 1976).

Respondent stress as a variable is more difficult to deal with than variables such as length or effort. While length and effort are fairly constant across all respondents, stress probably involves much more individual variance. Although we think of some topics as more threatening or sensitive than others, e.g., illegal behavior, sex, drug use, there still seems to be substantial individual differences in sensitivity to topics. Thus the stratagems for coping with differences in respondent stress may have to depend on finer tuning or adjustment of data based on the data from the individual respondent rather than on some more general procedure that would apply to all respondents.

4. Frequency of being interviewed.

I have already touched on the problem of repeated interviews under the discussion of length. Clearly, repeated interviews as part of a single longitudinal study pose problems of respondent burden. The difficulties in maintaining high completion rates in longitudinal studies are well known. Many of the difficulties come from locational problems with a mobile population and some come from maintaining co-operation. On the whole, however, the fact that respondents have previously responded to an interview is the best predictor of subsequent participation, given that they can be located. After several waves of interviewing, one has probably gotten a sample of co-operative respondents who will continue to participate. By that time they know what they are in for, even if the exact number of waves was not known in the beginning.

There is another source of burden to some respondents about which more should be known. I mean here the problem of being repeatedly drawn in samples of different and independent studies. As long as one is thinking about national probability samples, the probability of a household falling into two independently drawn samples is small. Survey research organizations, such as NORC, make sure that the same segment of households is not drawn more than once in five years. Even with the overlap of the major PSU's, overburdening the same households with interviews, does not yet seem to be a problem.

A recent study by the Survey Research Center and the Bureau of the Census (Goldfield et al., 1977) asked about frequency of receiving questionnaires in the mail, telephone interviews or requests for personal interviews. Data from this study indicate that about half of the respondents (54 percent) reported survey contacts of some kind in the last four or five years.

There are, however, classes of respondents who are more frequently selected in samples and for whom the burden may be perceived as high. When the population is relatively small, as for example, a single professional group such as physicians or more particularly the specialties, or incumbents of a particular position, such as mayors of cities or members of Congress, the probability of falling into a sample for independent studies becomes fairly high. When the population is very small, as with chairmen of psychology departments, the temptation to do a census is overwhelming and thus one becomes a respondent in every study done on that population.

In the medical area we appear to be reaching a point at which guidelines

need to be developed about the number of surveys a particular respondent should be asked to participate in over a given period of time. High response rates for physicians can still be obtained even when the length and amount of effort required is high, as for example in the National Ambulatory Medical Care study (NAMCS) which requires physicians to fill out a questionnaire for each of their outpatients for a week. With considerable effort and support by the relevant professional societies, response rates averaging 80 to 85 percent are maintained each week. One of the elements in maintaining that rate is the promise to the physicians that they will not be asked to be respondents in the NAMCS study more than once in two years. As surveys of medical care practitioners become part of a routine monitoring of the medical care system, procedures to protect respondents against overinterviewing will have to be worked out. Otherwise, we run the risk of a major revolt from segments of the population that will undermine the entire data collection process.

Conclusion. I have tried to outline some of the issues with regard to respondent burden that are of importance in enhancing the quality of data collected in surveys. The major theme throughout is that respondents seem to be willing to accept high levels of burden if they are convinced that the data are important. In general, it seems to me the problem is not: is there a burden level which respondents will not tolerate, but rather how to relate the level of burden to the importance of the data. To a considerable extent, this is controlled by the amount of funding available, since greater respondent burden usually requires more extensive efforts to insure high response rates and good quality data. One problem that is not easily related to budgetary control is the increasing use of surveys among specialized populations. In some respects these surveys may have high importance but become burdensome just because the population is so small and the probability of multiple interviews is high. Given the decentralized system of funding and conducting research, it is difficult to see how the overworking of some classes of respondents is to be prevented. But I think we must give some serious attention to the matter or it may be determined for us by others. The recent experience with the attempt to cut down the amount of data supplied by citizens does not suggest a welcome precedent.

References

Bradburn, N. M., and Mason, William. The effect of question order on responses. Journal of Marketing Research, Vol 1, 1964, pp. 57-61.

- Bradburn, N. M., Sudman, S., Blair, E, and Stocking, C. Question threat and response bias. Public Opinion Quarterly, Vol. 42, 1978, pp. 221-234.
- Champion, D. J. and Sear, A. M. Questionnaire response rate: a methodological analysis. Social Forces, Vol. 47, No. 3, March, 1969, pp. 335-339.
- Dillman, Don A. Mail and Telephone Surveys. New York: Wiley Interscience, 1978.
- Johnson, W. T. and Delamater, J. D. Response effects in sex surveys. Public Opinion Quarterly, Vol. 40, 1976, pp. 165-181.
- Locander, W., Sudman, S., and Bradburn, N. M. An investigation of interview method, threat and response distortion. Journal of American Statistical Association, Vol. 71, No. 354, pp. 269-275.
- National Center for Health Services Research. Advance in Health Survey Methods. DHEW Publication No. (HRA) 77-3154, 1977.
- National Center for Health Statistics. A study of the effect of remuneration upon response in the Health and Nutrition Examination Survey. Vital and Health Statistics, Series 2, No. 76, Oct., 1975.
- Noelle-Neumann, E. Die Empfindlichkeit demoskopischer Messinstrumente. In Allensbacher Jahrbuch der Demoskopie, 1976. Wien: Verlag Fritz Molden, 1976.
- Orne, M. Demand characteristics and the concept of quasi-controls. In R. Rosenthal and R. L. Rosnow (eds). Artifact in Behavioral Research. New York: Academic Press, 1969, pp. 143-179.
- Sheth, J., and Roscoe, A. M. Impact of questionnaire length, follow-up methods, and geographical location on response rate to a mail survey. Journal of Applied Psychology, Vol. 60, No. 2, 1975, pp. 252-254.
- Singer, Eleanor. Informed consent. American Sociological Review. Vol. 43, No. 2, April, 1978, pp. 144-161.
- Sudman, S., and Bradburn, N. M. Response Effects in Surveys: A Review and Synthesis. Chicago: Aldine Publishing Co., 1974.