
**AN
INVESTIGATION
OF RESPONSE
ERROR**



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AN INVESTIGATION OF RESPONSE ERROR

STUDIES IN CONSUMER SAVINGS

No. 1 Collecting Financial Data by Consumer Panel Technique. *Robert Ferber*

Studies in Consumer Savings, No. 2

CONSUMER SAVINGS PROJECT
INTER-UNIVERSITY COMMITTEE FOR
RESEARCH ON CONSUMER BEHAVIOR

AN
INVESTIGATION
OF RESPONSE
ERROR

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PREFACE

This monograph is the second in a series of technical reports presenting findings of the Consumer Savings Project of the Inter-University Committee for Research on Consumer Behavior. It is based on a series of studies undertaken by the Survey Research Center of the University of Michigan and integrates into the findings some results of earlier exploratory investigations conducted by the Center. The monograph throws light on the magnitude and direction of response error that is encountered in consumer financial surveys relating to personal savings accounts, personal cash loans, and automobile debt.

The Inter-University Committee is indebted to John B. Lansing for his many valuable contributions to these studies. He gave considerable time and effort to planning the studies and to analyzing the data.

Except for the study described in Chapter II, the interview-and-verification experiments described in this monograph were planned and conducted as part of the Consumer Savings Project. This is an integrated project designed to:

1. Determine the reliability of survey techniques for collecting from consumers quantitative financial information, and develop new techniques of improved reliability.
2. Develop procedures for obtaining these data on a current and continuing basis with a known degree of reliability, with sufficient frequency and accuracy for the practical needs of policy-makers in government and business.
3. Begin to collect consumer financial data of a kind which have not hitherto been available but are of strategic importance in studying the decisions consumers make about their assets and debts, spending, and saving.

The first monograph in this series, entitled "Collecting Financial Data by Consumer Panel Techniques: A Case Study," presented findings obtained in the course of the first panel operation undertaken as part of this project. Some of the field experiments described in the present monograph explore further hypotheses suggested during the course of this panel operation. The present results lead to a number of additional, important conclusions on the nature of response error in financial surveys and on possible means of counteracting these errors in future surveys.

Other monographs in this series will present further information on the scope and nature of response errors in consumer financial surveys. In addition, they will focus on methods of utilizing these findings as a basis for developing improved approaches to the collection of data on consumer finances.

It is anticipated that a summary volume will appear after completion of the various field operations associated with the project.

This project is financed by a grant from the Ford Foundation. Robert Ferber, research professor of economics at the University of Illinois, is director of the project.

The members of the Inter-University Committee for Research on Consumer Behavior are:

Lincoln Clark, New York University, Secretary-Treasurer

Robert Ferber, University of Illinois

Raymond Goldsmith, New York University

George Katona, University of Michigan

Theodore Newcomb, University of Michigan

James Tobin, Yale University

Guy Orcutt, University of Wisconsin, Chairman

The monographs in this series are research reports. The Inter-University Committee, as sponsor of this research, makes every effort to ensure both the quality of the reports and their orientation toward meeting a real need. Nevertheless, the findings reported in this way summarize conclusions arrived at by project staff and do not necessarily represent the individual or collective views of the members of the Inter-University Committee.

Guy Orcutt, Chairman

Inter-University Committee
for Research on Consumer Behavior

ACKNOWLEDGMENTS

The project could not have been carried out without the cooperation of several financial institutions. The authors are grateful for the interest in the project shown by representatives of these organizations and for their active assistance in carrying out the work.

The authors of this report further wish to acknowledge the invaluable assistance of their colleagues at the Survey Research Center. The study was done in the Economic Behavior Program of the Center, George Katona, Director. The Center itself is directed by Angus Campbell; it is a division of the Institute for Social Research, which is directed by Rensis Likert. Dr. Edward S. Bordin, Department of Psychology, University of Michigan, served as a psychological consultant. Dr. Charles F. Cannell, Head of the Field Section, Survey Research Center, played an active role in the development of the field work. Miss Irene Hess, Assistant Head of Sampling Section, Survey Research Center, assumed responsibility for the work at the Center on the design of the required samples. Dr. James N. Morgan, Program Director, Survey Research Center, displayed an active interest in the project from its inception. Dr. Ralph Bristol, now of Rand Corporation, Santa Monica, California, directed much of the work on car debt in Chicago which is reported in Chapter III. Dr. Frederick May, now of the University of Missouri, arranged the laboratory investigation described in Chapter IV. Dr. Mordechai E. Kreinin, now of Michigan State University, conducted the special check of data on car debt from the Survey of Consumer Finances reported in Chapter III. This list could easily be extended: it is not possible to mention individually all of the members of the staff of the Survey Research Center who contributed to the work reported here. Without the active cooperation of these individuals this investigation could not have been carried out.

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PART ONE

INTRODUCTION

I. A STATEMENT OF THE PROBLEM

The survey method has been used extensively in studies of saving and other aspects of consumer finances, and it may be expected to contribute further in the future. The contribution of the survey technique will be maximized if the errors in estimates of such items as consumer holdings of liquid assets and their indebtedness can be measured and reduced. Three main categories of error can be identified, and each requires a somewhat different approach for correction.

The sampling error - due to bad sample design in the survey - in estimates of such magnitudes as mean debt per family arising from car purchases can be estimated for a particular probability sample and the size of the error can be controlled by changing the characteristics of the sample. It is the error which arises because not every individual in the population under study was included in the sample.

A second type of error is that of non-response, where an individual is included in the sample but the designated respondent is not interviewed. If the non-responses differ from the persons interviewed in some systematic way, a bias may be introduced. Errors of non-response are less manageable than sampling errors, because the bias may be unknown in direction or in magnitude, but, at least, the number of non-responses for any survey is usually known. The present study contains some information on the bias of non-response in financial surveys.

The present study is primarily concerned, however, with the third main class of error, response error. If the reported value of a statistic differs from the actual value in any interview there is an error of response with respect to the item of information. Response error, thus defined, includes errors made in processing and tabulating completed interviews. This monograph, however, is concerned only with errors made in the interview itself and in the write-up of the interview by the interviewer, and subsequent use of the term "response error" in this report is restricted to such a meaning.

The existence and importance of response error in reports of some types of data in financial surveys has become more and more evident and has led to serious concern as to the validity of the data. Critical study of the data has shown that response error is significant in regard to certain financial topics, but that it is not significant in regard to other topics.

Aggregate figures derived from the Surveys of Consumer Finances have been compared with aggregates independently derived from such sources as Census reports, sales, savings institution and insurance company reports, government administrative records, and data gathered by the Departments of Labor, Agriculture, and Commerce. These comparisons suggest that Survey of Consumer

Finances aggregates are very accurate in regard to income, purchases of consumer durables, housing tenure, mortgage debt outstanding, and mortgage and rental payments.

On the other hand, comparisons of Survey of Consumer Finances personal debt data with Federal Reserve Board estimates based on lender sources display significant underreporting in the former.

Data on liquid asset holdings show the same picture. Estimates of aggregate liquid asset holdings from the Surveys of Consumer Finances have been consistently lower than estimates based on institutional records by one-third or more.

Financial surveys are subject to significant response error, but such errors are primarily restricted to reports of personal debts and liquid asset holdings. The preceding discussion dealt with aggregates; but it can be argued that the prime value of surveys lies in their ability to ascertain several items of information about the same family or spending unit and, thus, to permit study of economic relationships. Errors may occur in means estimated from surveys, yet the data may be valuable for the study of interrelationships among economic, sociological, and psychological variables. Such an argument, however, certainly does not obviate the necessity for attempting to measure and reduce response error. Response errors limit the contribution to knowledge of the survey technique. The optimal use of the technique requires the sophisticated measurement and control of such errors.

The studies discussed in this monograph were attempts to measure and manipulate response error in the areas of personal savings accounts, personal cash loans, and automobile debts. The use of the word "error," in the present context, implies the existence of a standard against which individual answers to particular questions can be checked. The investigator should be able to satisfy himself that he has before him two observations which refer to the same fact. Where the two observations are not identical, he would like to be able to state that one of the two is correct, and that the discrepancy is the result of an error in the other. In order to certify the correctness of one of the observations, individuals were selected from institutional and official records (depending on the particular study, this was either a savings account balance or information on an automobile or cash loan). The individuals selected were interviewed in an attempt to elicit by questioning information which could later be verified (with due safeguards regarding the anonymity of the respondents). The interviewers themselves did not know how the sample was selected and usually they had not even been told which financial topic was of principal interest.

The pursuit of the twin goals of measuring the error and of reducing or controlling it led to forming a judgment about sources of error by careful study of individual interviews, and this approach was

used extensively in the present research. An additional technique, which was also used, is to introduce an experimental design. That is, an investigator may systemically vary different aspects of the technique of investigation and compare the magnitude of the response error in interviews taken using the different techniques.

The measurement and manipulation of response error, as reported in the following chapters, turned out to be very difficult but certainly not impossible. The preliminary studies discussed in Chapters II, III, and IV provided a valuable amount of experience for the more intensive field experiments reported in Chapters V, VI, and VII. The first preliminary study (Chapter II) was an attempt to measure the validity of individual reports of amounts in savings accounts and of changes in those amounts. Through the cooperation of savings institutions, the Center interviewed close to 100 persons for whom the balance of a savings account could be verified. The results were disappointing in view of the expectations based upon more general surveys: the response rate was much lower than usual, and response error was significantly evident. The more recent field experiments, however, have shown the low response rate (fluctuating around 70 percent as opposed to the more usual 85 percent in Surveys of Consumer Finances) to be characteristic of samples of savings account holders, a finding which is discussed more fully in later chapters. All in all, it was very difficult to assess the accuracy of such projects as the Surveys of Consumer Finances on the basis of this early study. Clearly, more work was called for, and this study did provide some hypotheses and insights amenable to systematic incorporation in subsequent designs.

Three years later, in 1957, the second preliminary study was undertaken (Chapter III). This study dealt with car debts and attempted to measure the accuracy of auto owners' reports against a criterion obtained from official records. It involved three separate stages: exploratory interviews, the main Chicago study, and an analysis of a small number of recent interviews from the Survey of Consumer Finances. Each stage yielded information which proved valuable. An interesting, although tentative, interpretation of some of the car study results has major implications for survey design. The data suggest that relatively high accuracy can be more readily obtained when only a few topics are covered, while to ask for a large number of items of information tends to result in a relatively low level of accuracy for each item. Furthermore, it was becoming very evident that what took place during the actual interview was of great importance to the research. An intense and sensitive scrutiny of the interview situation seemed essential.

Just such an intensive scrutiny of the interview situation is discussed in Chapter IV. In that project, a small number of persons were individually interviewed in a room which had a one-way screen

and a one-way audio system, enabling outside observation of the interaction between interviewer and respondent. This observational study directly led to a radical change in questionnaire construction which was later used as part of the experimental design in one of the field studies.

With such a background of preliminary studies and knowledge gained from more general surveys, it was felt that the next step had to be field experiments of systematic design. In the fall of 1958, the first of three field experiments was begun. The study (see Chapter V) took place in two eastern metropolitan areas and involved a set of interviews in the fall of 1958 and reinterviews of the same people in the spring of 1959. In the fall study, half of the sample was interviewed with a lengthy, structured questionnaire of the type used in the Surveys of Consumer Finances; the other half was interviewed with a short, relatively unstructured questionnaire which necessitated more than the usual amount of probing on the part of the interviewers, who had received training to this end. This experimental design was based on the experience of the preliminary studies described previously. The sample was selected from the personal savings account records of cooperating savings institutions and included only persons with large balances (\$1,000 and over). The intentions of the researchers, then, were: (1) to measure the frequency and magnitude of the discrepancies between reported and actual balances in the relevant account for specified dates, and (2) to compare the magnitudes of the response errors of the structured questionnaire with those of the unstructured interview and to determine the relative efficiencies of the two instruments.

The spring reinterview questionnaires were all of one type, but they did provide a comparison with the data obtained in the fall. The use of the reinterview to gather data is discussed in Chapter V.

The questionnaires -- both fall and spring -- also included a number of psychological instruments designed to tap the underlying characteristics of the respondents, on the assumption that accurate and inaccurate respondents might well vary along psychological dimensions. If so, then the identification and measurement of such differences might yield insight into the understanding and control of response error.

The next field experiment dealt with persons known to have active cash loans from personal loan companies. The primary experimental technique involved manipulating the degree of anonymity associated with the interview situation, ranging from one extreme wherein the interviewer asked for a particular respondent by name to the other extreme where the respondent's name was never used and the financial data might never be seen by the interviewer. This last was accomplished by a "sealed envelope technique"; a separate form containing answers to the financial questions was placed in an

envelope, sealed, and mailed directly to Ann Arbor. Some of the psychological instruments used in the savings account studies in the eastern cities were repeated in the cash borrowers' study, allowing a comparison between the two groups. In addition, a post-interview mail questionnaire was sent to the respondents, asking for their reactions to the interview and interviewer.

The third and final field experiment took place during the fall of 1959 and once again dealt with holders of savings accounts, this time in a third eastern metropolitan area. A two by two experimental design was used: the preferred respondent was either the head of the household or the spouse of the head, and the respondent either was offered \$10 for filling out a fairly detailed financial form or was not offered any money for filling it out. Thus, the interview situations could be classified as "Head-Pay," "Head-No Pay," "Wife-Pay," and "Wife-No Pay." Each technique could be compared against the others in terms of the accuracy of the respondents' reports of their savings account balances.

On the basis of analysis of the field experiments, a number of conclusions have been drawn regarding response error in financial surveys; in addition, certain of the results suggest hypotheses which are clearly testable in future research.

In the following chapters of this monograph, the studies and interpretations mentioned in summary fashion in this introduction are discussed at length. Part Two (Chapters II-IV) covers the preliminary studies. Part Three (Chapters V-VIII) reports the field experiments, including the financial, socio-economic, and psychological correlates of the response errors.

Part Four (Chapter IX), after summarizing and integrating the results of the field experiments, presents the theory of response error which has developed on the basis of this over-all project. This chapter includes a brief critical evaluation of the specific techniques used in the various studies and some general observations on the conduct of research on response error.

The problem of response error is quite serious, and in part one must learn to live with it; but there are ways of controlling it and researchers certainly can work to minimize it. Research on response error -- with dual goals of measurement and control -- certainly is not easy; but neither is it impossible nor impractical. The headway made to date indicates that attempts to control the error -- and to measure it -- will require a great deal of hard and careful work, and that techniques which are successful in one situation may well be unsuccessful in another. Since this type of research is not easy to carry out, this monograph includes discussions of many of the difficulties which arose in the present investigation in the hope that others may be saved trouble and expense in facing similar problems.

PART TWO

PRELIMINARY STUDIES

II. PRELIMINARY STUDY OF SAVINGS ACCOUNTS

During the summer of 1954 the staff of the Economic Behavior Program of the Survey Research Center attempted for the first time to measure the validity of individual reports of amounts in savings accounts and changes in those amounts. The project was under the direction of James N. Morgan. It followed projects which were concerned with the measurement of response error in reports of the value of owner occupied homes and family income which have been reported elsewhere^{1,2}. This chapter is based on Morgan's original memorandum describing the results of this preliminary inquiry.

Purposes of the Study and Description of Procedures

The main purpose of this pilot study was to check the respondents' answers against the true facts in order to improve future research. For this type of check the important consideration was not so much to obtain a sample that would be efficient for quantification of results as to obtain a sample that would be unbiased and randomly selected and would permit the investigation of factors associated with accuracy or inaccuracy of reporting. Since the investigators had only hunches as to possible sources of error, a small-scale test intended to develop hypotheses and to develop a better questionnaire was what was planned.

The questionnaire used was a short one which led relatively directly to the subject of savings accounts via questions about how the family was getting along financially, the occupation and income of the family, their debts and savings, various forms of saving, and amounts held in these various forms. Then the number of savings accounts, whether they were single or joint, and whether they were all in the same institution were ascertained. The respondent was asked whether he was close or far off in his report of amounts, and then the interview closed with some standard and easy questions concerning demographic data.

¹ Leslie Kish and John B. Lansing, "Response Errors in Estimating the Value of Homes," Journal of the American Statistical Association (Sept., 1954), pp. 520-38.

² Monroe G. Sirken, E. Scott Maynes, and John A. Frechtling, "The Survey of Consumer Finances and the Census Quality Check," An Appraisal of the 1950 Census Income Data, Studies in Income and Wealth, Vol. 23, National Bureau of Economic Research (Princeton, New Jersey: Princeton University Press, 1958), pp. 127-69.

Table 1. Disposition of Selected
Addresses in Preliminary Savings Study

Groups of addresses	Number of addresses
Selected for clustering	862
Selected in clusters	216
Interview or contact attempted	197
Non-sample addresses (moved away, dead, no such address exists)	64
Selected addresses properly in sample	133

The cooperation of a savings institution which already had drawn a sample of savings accounts for its own purposes was secured. The institution selected a sub-sample from the larger sample already drawn, in such a way as to reduce the spread of the sampling ratios for different-sized accounts from 500: 20: 1 to 20: 4: 1. For purposes of interpretation, it is important to note the following things about the resulting sample: First, it was designed to give representation to four different counties, three strata of account sizes, and three levels of account activity. Second, losses through inaccurate addresses, accounts that do not belong in a sample of individuals' accounts, and other accounts that could not be checked make the sample inappropriate for making aggregate estimates. One must also keep in mind that this is a small sample and that the distribution of savings accounts by size is highly skewed.

The disposition of the selected addresses is shown in the accompanying table (Table 1).

The information in Table 1 is on an unweighted basis. That is, each address is counted as one with no attempt to compensate for the variable sampling fraction. The table shows that only about one address in four of those originally selected for questioning was actually selected for interviewing. Most of the loss came in the selection of clusters. The purpose of the clustering, of course, was to make it possible for the interviewers to take the hundred interviews planned without travelling all over the four counties in the sample.

Error of Non-Response

Table 2 shows the disposition between responses and non-responses for the 133 addresses at which interviews should ideally have been taken. The response rate of 71 percent is considerably lower than the average of about 85 percent which interviewers from the Survey Research Center customarily have obtained in the Surveys of

Table 2. Response Rate in Preliminary Savings Study

Response disposition	Percent	Number
Interviews	71	95
Non-interviews	29	38
Not at home	11	15
Refusals and other non-response	17	23
Total	100 ^a	133

^a Detail will not add to total because of rounding.

Consumer Finances. At the time when the study was completed this low response rate was taken as indication that the field work had been badly managed. In the light of experience with subsequent tests it appears that the low response rate may be the result of difficulty in interviewing this type of person. This point will be discussed more fully in later chapters.

Information about the amounts missed and about the accounts missed is shown in Table 3. This table is on a weighted basis. It shows that about 4.2 percent of the accounts were missed in the field because of refusals, because the respondent was ill, because of language difficulty, and so forth. These accounts included 16.9 percent of the total amount in the sample. Hence, it is apparent that the accounts missed for this reason were on the average large accounts. It is instructive to know that the cases where the respondent was unknown, dead, moved away, or had no such address account for about the same portion of amounts as they do of accounts. The interviews actually taken account for 60 percent of the accounts but only 36.8 percent of the amounts. In other words, these data show a tendency for the average balance to be larger in the non-responses than among the responses. Further information on the relation between size of account and response disposition will be reported in later chapters. These later results point to different conclusions about the relation between size of balance and whether an interview will be taken.

Comments on Response Error

The information obtained from this study about response error is summarized in Table 4. This table includes some secondary accounts which could be checked because they were in the same institution as the accounts originally selected. It excludes cases where amounts could not be checked. Altogether a total of 77 accounts could be checked.

Table 3. Estimates of Distribution of Savings Accounts and of Amounts in Savings Accounts in Preliminary Savings Study^a

Sources of information	Percent of amounts	Percent of accounts (as of May, 1954)
Information from savings institution records		
Trusts (for minors)	1.7	10.0
Organizations	0.9	0.7
Estates of deceased	3.6	0.5
Special accounts like above but not registered as such	0.8	2.0
Armed services address	3.5	0.5
Out of sample points address	2.8	4.6
P. O. box or other inadequate address	3.1	1.1
Information from field reports		
Refusal, ill, language difficulty, and so forth	16.9	4.2
Proper respondent or spouse not at home (2 calls)	9.6	2.2
Unknown, dead, moved away, no such address	13.2	11.7
Not contacted (address not used)	7.1	2.5
Interviewed	36.8	60.0
Total	100.0	100.0

^a The interview sometimes picked up more than one savings account at the institution involved, and in later analysis the weights are divided over these accounts in tabulations, since the chance of each of them being selected was larger in this case. In a number of interviews, the amounts were not given or were not useful for check because the respondent had accounts in several institutions.

Weights are based on inverse of products of sampling fractions, and all sampling was on a stratified random probability basis.

Table 4. Interview Report on Amount in Savings Account at Time of Interview Compared with Institution Report in Preliminary Savings Study

Institution report	Interview report on amount										Total
	0	\$1-\$199	\$200-\$499	\$500-\$999	\$1,000-\$1,999	\$2,000-\$4,999	\$5,000-\$9,999	\$10,000-\$24,999	\$25,000 and over		
0	10	18	2		1						0
\$1-\$199	2	4	3			2					31
\$200-\$499	1	1	2		1						11
\$500-\$999					4						7
\$1,000-\$1,999	1		1		2		4				4
\$2,000-\$4,999	2				1		5				8
\$5,000-\$9,999	2				1		1				10
\$10,000-\$24,999								1			4
\$25,000 and over									1		2
Total	18	18	7	8	10	4	10	1	1	1	77

Table 5. Comparison of Groups with Accurate Versus Inaccurate Reports on Amounts in Savings Accounts at Time of Interview in Preliminary Savings Study (Percentage distribution of interviews)

Groups Interviewed	Amounts off \$200 or more	Amounts correct within \$200
Owns business	31	5
Over 45 years old	81	43
Large account according to institution records (\$5,000 or more)	42	9
Active account (one or more withdrawals January, 1949-December, 1953)	39	17
Reported within correct bracket ^a	14	74
Income of \$5,000 or more	31	37
Number of cases ^b	36	35

^a Large discrepancies in large accounts can still be in same bracket, and failure to report very small accounts can be an error of one bracket.

^b No second accounts included here.

Of these 77 cases, 34 were in the correct bracket, 11 were one or more brackets higher in the interview report, and 32 were one or more brackets lower. Thus, underreporting by respondents was approximately three times as frequent as overreporting. Of the 32 reports which were too low, 10 involved an account under \$200. Four reports were more than one bracket too high. Twelve reports were too low by more than one bracket, including 8 who reported no savings account when actually they had one. Doubtless, the tendency to underreport was stronger than the tendency to overreport.

Table 5 shows some characteristics of those who gave accurate reports within \$200 compared with those who did not. Inaccurate reporters were older, had larger accounts, and were more likely to own a business. An absolute error of \$200 is more probable the larger the account; on a balance of \$5,000 an error of \$200 is small in terms of percent while on an account of \$100 an error of \$200 is very large in terms of percent. Since old people and businessmen tend to have larger balances, it is not surprising to find that they are more likely to give reports in error by \$200 or more. It is interesting to note that more of those who were in error by \$200 or more had active accounts. Evidently more recent use of the passbook did not improve accuracy of report.

Another way to summarize the average error of report is to compare the mean balance reported by respondents, \$1,464, with the mean balance reported by the institution, which was \$2,904. The average difference, thus, was \$1,440; and the average balance reported by the respondents was about half that indicated by the institution. Another relevant statistic is the average absolute discrepancy, disregarding the sign, which was \$1,821. This estimate was dominated by reports from a relatively small number of respondents who made large errors. Of this discrepancy, 47 percent was accounted for by farmers and businessmen in the sample.

For many purposes the change in the balance in a savings account is at least as interesting as the absolute amount in the account at the time of interview. Table 6 summarizes the information from this study on the validity of reports of change in amount in savings accounts. This table includes only the 68 cases where there seems to be evidence of a match and where all information in amounts "now" and a "a year ago" was given. Of the 68 responses, 37 were incorrect by one bracket or more. The remaining 31 were in the correct bracket. These results, of course, depend upon the choice of brackets. Alternatively one may note that of the 68 reports, 38 were in error by \$200 or more while 30 were correct within this margin. In some of these cases of large discrepancies the interview made so much sense in terms of internal consistency that it seems highly probable that the respondent had in mind a different savings account which changed in the way described in the interview.

Table 6. Interview Report on Change in Amount in Savings Accounts Compared with Institution Report in Preliminary Savings Study

Institution report on change	Interview report on change										Total	
	+\$1,000	+\$500-\$999	+\$200-\$499	+\$1-\$199	0	-\$1-\$199	-\$200-\$499	-\$500-\$999	-\$1,000 or more			
Increases												
\$1,000	2	1	1									6
\$500-\$999		4			2						1	7
\$200-\$499					4							4
\$1-\$199			2	5	10	1						19
Decreases												
\$1-\$199			1		1	1						5
\$200-\$499											1	7
\$500-\$999					2							2
\$1,000 or more											7	8
No change					8						1	10
Total	2	5	4	6	27	2	10	2	10		10	68

Table 7. Characteristics of Accurate Versus Inaccurate Respondents on Change in Savings Accounts in Preliminary Savings Study (Percentage distribution of interviews)

Characteristics of respondent	Report of change	
	Off by \$200 or more	Correct within \$200
Owens business	24	13
Over 45 years old	66	54
Large account according to institution records (\$5,000 or more)	45	10
Active account (one or more withdrawals January, 1949-December, 1953)	32	30
Owens business, farm, stock, or other real estate	45	37
Income of \$5,000 or more	34	47
"Amount now" off by \$500 or more	54	17
Number of cases	38	30

The characteristics of respondents who reported accurately are compared with the characteristics of those who reported inaccurately with regard to the change in their savings account in Table 7. Again, the inaccurate reporters are likely to have larger accounts, to be older, and to own a business. Activity of account seems to have made no difference. People in the higher income groups seem if anything to have reported more accurately.

Conclusions

The investigators concluded from this pilot investigation that the questionnaire had not been well designed and that rapport during interviews was not good. The interviewers were mystified as to the purpose of this study and this factor no doubt influenced their behavior in the interview situation and thus, indirectly, the behavior of the respondents. The high refusal rate suggested that the respondents who were interviewed probably didn't enjoy the experience. Later research casts some doubt on this interpretation. A high refusal rate does not seem to be good evidence of poor rapport on the part of those respondents who were in fact interviewed.

It was difficult to assess from this study just what the accuracy level of a project such as the Survey of Consumer Finances might be. The investigation seemed to lead to the hypothesis that accuracy is a function both of the amount of time spent on the particular topic in the interview and of the level of rapport between interviewer and respondent. However, whatever its causes, the frequency and magnitude of the discrepancies pointed strongly to the need for further research. The investigators further concluded that this additional research should be designed to find out what the sources of error are. Are they poor memory, poor questionnaire design, or what?

These "mistakes" as to questionnaire design and level of rapport were kept in mind in planning subsequent studies, especially the studies of savings accounts reported in Chapters V and VII. All of the exhortations were very largely followed, with the exception of a suggestion that the name of the savings institution should be asked in future studies. One reason for leaving out this question was the belief that there would be damage to rapport if the question were asked. It would not be easy to explain to a respondent why that particular question had to be answered. Respondents might feel that they were being asked for extremely specific information, of a type which could be used to check up on them. Hence, the reports would be made less valid by the very procedure introduced to measure their accuracy. A second consideration was the desire to avoid calling attention to the connection between the particular financial institution and the project. Other methods of matching the report against the records were tried and proved reasonably successful. They will be discussed later.

III. PRELIMINARY STUDIES OF CAR DEBT

Consumer indebtedness on automobiles is one of the most important sharply fluctuating components of consumer saving. The survey method has been used extensively in studies of consumer debt and may be expected to contribute further in the future. Public records frequently are made of the existence of individual debts. Access to these records for research purposes is much easier than access to records of other financial information. It was decided, therefore, that the next study of response error should be in the field of car debt.

This study consisted of three parts. These parts correspond to the three sections of this chapter. The first section, "The Exploratory Interviews," describes 25 short interviews taken in Michigan in January and February, 1957. The second section, "The Interviews in Chicago," describes 92 interviews taken there in the course of a small-scale field experiment. The experiment was intended in part to check hypotheses growing out of the analysis of the exploratory interviews in Michigan. The third section, "A Special Check Using Data from the 1956 Survey of Consumer Finances," reports an effort to check the accuracy of data collected in the course of a regular survey. This work proceeded concurrently with the other two parts of the study.

The Exploratory Interviews

Purposes of the Study and Description of Procedures

It is an axiom in the conduct of surveys that new questionnaires and new field procedures should be tried out before they are adopted for use in any major study. Such exploratory work may also be helpful in developing procedures for use in analysis and in trying out procedures for combining data from two or more sources. Finally, exploratory interviews may lead to new hypotheses. For all of these reasons it seemed appropriate to take a limited number of interviews on car debt in the winter of 1957.

Some 25 interviews were taken in Wayne, Washtenaw, and Lenawee counties in Michigan, during January and February, 1957. The respondents were people who had bought a new car in 1956 and incurred debt on that purchase. Their names and information about their car debts were secured from the State of Michigan Motor Vehicle Registration office and also, in some instances, from the appropriate county registrar of deeds.

The procedures used were unusual in several respects. The questionnaire was short and the interviews averaged about 20 minutes in length. Only one interviewer was employed. That

interviewer had full knowledge of the purposes of the study and of the detailed facts about each person to be interviewed.³

Measures of Error

For these exploratory interviews no attempt was made to select a true probability sample of respondents and no measures of non-response were estimated.

The original plan was to compare three types of data obtained by the interviewer with the outside data in order to measure response error in reports of the price of the car, the number and amount of the instalment payments, and the total debt incurred at time of purchase. As the investigation progressed emphasis shifted to the single comparison of total debt for reasons discussed below.

It was originally planned to use estimates of price based on the amount of sales tax recorded by the state office to measure the validity of respondents' reports of price. Preliminary study of the prices reported by respondents indicated that frequently the amount in the interview was larger than that estimated from the sales tax. It also proved possible to compare respondents' reports with data on chattel mortgages in county records. In nine cases complete records of this type were available. A study of these nine cases indicated that prices from the county records were substantially higher than those in the state records and very close to the figures obtained by interviewers. How might discrepancies arise between the county and state data? The price of a car may depend upon the stated value of the car traded in. For purposes of payment of sales tax both buyer and seller may be willing to state that value at a modest figure. In estimating the value of the security against which a loan is made, on the other hand, there may be a tendency to assign to the trade-in its full value. An additional problem is that respondents may not be clear as to whether the cost of financing should be included in the price or should be treated as something added to the price. For these reasons the investigators decided to abandon the attempt to measure the accuracy of respondents' reports of price by comparing their statements with estimates based on the amount of sales tax paid to the state.

Information about the number and frequency of payments was available from county records in the nine cases mentioned previously. It was originally planned to make an independent check of the accuracy

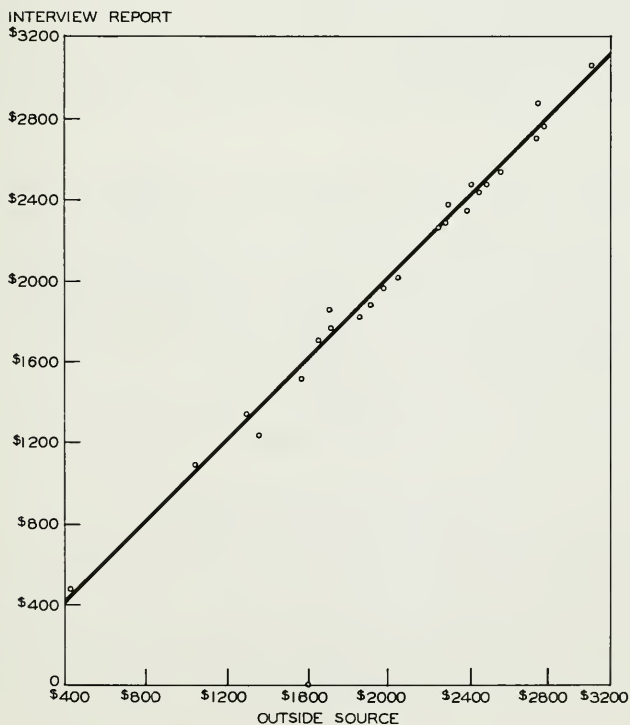
³ There was another innovation of a technical character. The interviewer attempted to record all the interviews on a tape recorder. However, technical difficulties with the tape recorder were greater than had been anticipated, and the recordings were far from clear. The analysis was based only on the written notes of the interviewer.

of reports of the number and frequency of payments in addition to the check on total debt originally incurred. It became apparent from the study of the interviews, however, that the respondents in most cases remembered the number and the amount of their payments better than they remembered the total debt incurred. Some respondents estimated the total debt by multiplying the size of payments times the total number of payments. It became evident that the best way to estimate the total debt from respondents' reports was by carrying out this multiplication. This practice was adopted in later stages of the project. Thus, the check on the accuracy of information of report on payments was consolidated with the check on the accuracy of report on total debt originally incurred.

Measures of Response Error

The reports of total debt obtained in this series of 25 exploratory interviews were remarkably accurate. There was one case in which the respondent failed to report the existence of a debt of over \$1,600, but in the remaining 24 cases the respondents reported the existence of a debt within a narrow margin of error. The comparison of total debt with the state (or county) records is summarized in Chart 1.

Chart 1. Total Car Debt Owed



As the data in the chart show, some of the reports were precisely accurate. There were a few minor discrepancies resulting from rounding the amount of the monthly payments to the nearest dollar. There were also minor discrepancies in a few cases where the first payment or the last payment was of an amount different from all other payments. Somewhat larger discrepancies resulted in a small number of reports when the respondent was not quite accurate in his report of the total number of payments. In general, however, the reports were extremely accurate.

Conclusions

It was to turn out that later investigations yielded less accurate reports than were obtained in these exploratory interviews. Why were these interviews better than those that were conducted subsequently? This topic will be examined again at the conclusion of this chapter. These interviews had several unique features. First, only one interviewer was involved. Second, the interviews were taken in small cities and rural areas. Third, the interviewer was working with a short questionnaire which was devoted essentially to one main topic of investigation. Fourth, the interviewer knew in advance what the right answers were to the questions which she was asking. At the time when these Michigan interviews were first being studied the investigators thought that it was the last feature of the situation which probably was decisive. This hypothesis was tested in the next phase of the work in the interviews in Chicago and found to be relatively unimportant.

Several incidental conclusions were drawn from this exploratory work. As already has been discussed, it was found to be impractical to make use of state records of the sales tax to measure the validity of respondents' reports of car debt. Experience with the records of debt on cars in county courthouses was more satisfactory. True, it was found that the existence of a chattel mortgage might be recorded on the title to a car but not in courthouse records. When the chattel mortgage was recorded in the county courthouse, however, access to it proved to be possible and the county records were a satisfactory source of information. It was decided, therefore, to make use of county records in the next phase of the research.

The Interviews in Chicago

Purposes of the Study and Description of Procedures

In the second stage of the research on car debt, interviews were taken with 92 respondents in Chicago. This phase of the work had two purposes. First, it was designed to obtain a larger and more care-

fully selected sample of respondents than had been used in the 25 exploratory interviews. Second, it was intended to test two hypotheses which corresponded to alternative explanations of the success of the interviewer in the exploratory interviews. These hypotheses, of course, also had other support. Length of questionnaire was selected as one of the variables to be studied on the basis of a particular theory of what occurs during an interview. Interviewers, it is argued, believe that respondents become impatient if an interview lasts too long. Since interviewers are reluctant to push respondents' patience too far, they tend to pace themselves during an interview. If the questionnaire is short, they proceed at a leisurely rate and take time to be sure the objective of each question is met before they proceed to the next. If the questionnaire is long, they hurry the interview. They accept the first answer offered and push on to the next question.

The second variable selected for study was the degree of information available to the interviewer. Is it true that interviewers always will get the right answer when they know in advance what the answer should be? It was not feasible to conceal from the interviewers the general purpose of the investigation. The interviewers could hardly fail to note some of the special features of the questionnaire which emphasized car debt, and they could hardly fail to notice that all of their respondents were people who had such debt. But it was entirely possible to withhold all detailed information about the particular loan known to be owed by each individual. The procedure adopted was to divide the addresses selected for interview on a random basis into four groups in the following manner:

<u>Group</u>	<u>Interviewer's Knowledge</u>	<u>Length of Questionnaire</u>
1	Knew amount of the loan	Long questionnaire
2	Knew amount of the loan	Short questionnaire
3	Did not know the amount	Long questionnaire
4	Did not know the amount	Short questionnaire

Method of Selection of Respondents

As was noted earlier, experience in the exploratory interviews indicated that records in county courthouses were more complete than data from the state. In particular, the county records included the number and amount of payments. It was decided, therefore, to sample directly from county records in this second stage. The decision to do the interviewing in Chicago was based on the availability of experienced interviewers in that city.

The sample was in fact drawn from lists of people having chattel

mortgages on their cars. All chattel mortgages, whether on cars, household, or business equipment are listed at the Cook County Building in Chicago. Only chattel mortgages secured exclusively by liens on automobiles were included in the sample, in contrast to mortgages involving liens on cars plus other property. The sample was also restricted to chattel mortgages on automobiles which were 1955, 1956, or 1957 models. Since the selection of the sample took place early in 1957 this meant that the automobiles were usually not over two years old. Only chattel mortgages were selected which were taken out between January 1, 1956, and April 1, 1957. Only mortgages were included which were scheduled to run beyond May, 1957. Finally, those individuals were excluded from the sample for whom a complete address could not be ascertained.

Unfortunately, this method of selecting the sample led to unforeseen difficulties. It was found that most new car sales in Chicago were financed by a conditional sales contract and that the terms of these sales contracts did not have to be filed in the State of Illinois. Of course, the lists of chattel mortgages did not include conditional sales contracts. It developed as the study progressed that many of the chattel mortgages were not primary loans; that is, they were not loans taken out in connection with the original purchase of the car. Many of the loans proved to be secondary debts taken out after the original purchase in which the car was put up as security. Such loans often arose out of missed payments or out of transactions in which the respondent borrowed money for purposes unrelated to the purchase of the car. The existence of these two types of loans in the sample complicated the subsequent analyses, especially since it could not be distinguished from the records alone whether the debt was a primary or a secondary loan.

As the early interviews came into the office and it became increasingly apparent that the sample included a large portion of loans which were not the original loans in connection with the purchase of the car, a number of addresses which were selected in a different manner were added to the sample. The additional addresses were selected from the files of the state and were intended to build up the number of respondents for whom data about the original or primary loan was known rather than data on non-primary loans. Altogether, 8 interviews were taken at these addresses.

Description of the Interviews

The 92 interviews were distributed among the four types of interview as follows:

<u>Group</u>	<u>Number of interviews</u>	<u>Mean length of interview (minutes)</u>
1 Interviewer knew amount; long questionnaire	26	54
2 Interviewer knew amount; short questionnaire	30	30
3 Interviewer did not know amount; long questionnaire	19	53
4 Interviewer did not know amount; short questionnaire	<u>17</u>	30
	92	

The uneven distribution of actual interviews among the four groups was an accident. The number of interviews in each group was intended to be the same, but there was a high and uneven incidence of respondents who had moved, inaccurate addresses, and non-responses.

It seems reasonable to conclude that the experimental manipulations were successfully carried out. That is, the long questionnaire did in fact take about 23 or 24 minutes more than the short questionnaire, and the interviewers, of course, were given detailed information in groups 1 and 2 but not in groups 3 and 4.

Measures of Error

Respondents sometimes grant an interview but refuse to answer some or all of the questions asked. In this study refusal to answer questions was unusual. Of the respondents 95 percent answered every question.

The basic results of this investigation are shown in a set of three tables, Tables 8, 9, and 10. The first of these tables is intended to answer the question, "Did the respondent report the loan about which information had been found in the county records, and if so, how accurately did he report the information?" In this table no distinction is made between primary and secondary loans. The table shows that of the 92 respondents, 49, or 54 percent, reported the existence of the loan under investigation. An additional 6 respondents may or may not have reported "our" loan. These respondents reported a loan but it was impossible to be sure from the interview whether the loan discussed in the interview was the same as that

AN INVESTIGATION OF RESPONSE ERROR

Table 8. Distribution of Interviews by Degree of Agreement Between Records and Response

Degree of agreement	All interviews		Interviewer knew details of loan		Interviewer did not know details of loan	
	Number	Percent	Long questionnaire	Short questionnaire	Long questionnaire	Short questionnaire
			Number	Percent	Number	Percent
Reported "our" loan	49	54	17	65	17	58
Amount times number of payments is within 5 percent of recorded amount times number of payments	33	36	10	38	13	44
Amount borrowed is within 5 percent but amount times number of payments is wrong by over 5 percent	8	9	2	8	3	11
Amount borrowed is wrong by 5 percent or more by either calculation	8	9	5 ^a	19	1	3
May or may not have reported "our" loan	6	6	1	4	2	6
Amount borrowed is within 5 percent but amount times number of payments is wrong by over 5 percent	1	1	0	0	1	3
Amount borrowed is wrong by over 5 percent by either calculation	5	5	1	4	1	3
Failed to report "our" loan						
Does not seem to be discussing "our" loan	30	32	6	23	10 ^b , ^b	33
Questionnaire incomplete						
"Our" car sold, now clear of debt, and so forth	7	8	2	8	1	3
Total	92	100	26	100	30	100
					19	100
					2	11
					5	47
					2	11
					17	100
					9	31
					5	26
					3 ^a	0
					1	5
					1	11
					0	0
					1	11
					5	47
					2	11
					17	100
					9	31
					5	26
					3 ^a	0
					1	5
					1	11
					0	0
					1	11
					5	47
					2	11
					17	100
					9	31
					5	26
					3 ^a	0
					1	5
					1	11
					0	0
					1	11
					5	47
					2	11
					17	100

^aIncludes 1 case in which there is reason to believe that our records may be in error.^bIncludes 1 case in which respondent reports that he never owned "our" car.

covered by the official records. A much larger group amounting to 30 respondents, or 32 percent of the total, failed to report the loan being investigated. Finally, there was a small group of 7 respondents whose loans apparently had not been properly covered by the questions in the schedule.

Table 8 also shows the degree of agreement between report and record for each of the four groups which had been given different experimental treatments. Since the number of interviews in each group was not large, it is difficult to draw conclusions from the results of the experimental manipulations. Of the four groups, the one which on the face of the data was the least satisfactory was that in which there was a long questionnaire and the interviewer did not know the details of the loan. This result is not easily interpreted, since one would expect that if length of questionnaire was the decisive factor the results would be equally unfortunate for the long questionnaire when the interviewer did know the details of the loan. The data do not support this interpretation. On the other hand, the fact that the interviewer did not know the details should have importance also for the short questionnaire; yet results for the short questionnaire did not differ, whether or not the interviewer knew these facts. This result will be discussed later in connection with other data.

One negative result of some interest does follow from these findings. It seems to be true that even though the interviewer knows the details of a loan, she may still have difficulty in getting the respondent to report them to her in an interview. It is not possible to explain the excellent results of the exploratory interviews discussed in Section 1 of this chapter simply on the ground that the interviewer in that phase of the study knew the details of the loans.

In Table 9, a distinction is made between primary and secondary loans. Unfortunately in 16 of the interviews it was not possible to tell whether "our" loan as described in the records was a primary or a secondary loan. This group of interviews naturally tends to be concentrated on those where "our" loan was not reported in the interview at all. Nevertheless, it is instructive to note that of the 36 cases where the loan being studied represented a primary debt on the car there were none where the loan was not reported. Of the 39 cases where the loan under scrutiny was a secondary debt, there were 17 where the loan was not reported. These results suggest that interviewers were more successful in bringing out the information on primary than on secondary loans. The principal type of response error found in this study, then, is complete misses of secondary loans, that is, failure to elicit any information about them.

There are two possible reasons for these misses. The first is imperfect design of the questionnaire. If the car in question had been sold or was clear of debt at the time the interviewer spoke to the respondent, the questionnaire would not elicit full information called

Table 9. Distribution of Interviews by Degree of Agreement Between Response and Recorded Loan Within Probable Purpose of Loan^a
(Distribution of numbers of interviews)

Degree of agreement	All purposes	Probable purpose of loan		Cannot tell, no clues, not ascertained
		"Our" loan primary debt on car	"Our" loan secondary debt on car	
Reported "our" loan	49	32	17	0
Amount times number of payments is within 5 percent of recorded amount times number of payments	33	21	12	0
Amount borrowed is within 5 percent but amount times number of payments is wrong by over 5 percent	8	5	3	0
Amount borrowed is wrong by 5 percent or more by either calculation	8	6	2	0
May or may not have reported "our" loan	6	4	2	0
Amount borrowed is within 5 percent but amount times number of payments is wrong by over 5 percent	1	1	0	0
Amount borrowed is wrong by over 5 percent by either calculation	5	3	2	0
Failed to report "our" loan				
Does not seem to be discussing "our" loan	30	0	17	13
Questionnaire incomplete				
"Our" car sold, now clear of debt, and so forth	6	0	3	3
Total	91	36	39	16

^a One interview in which both amount times number of payments and amount borrowed were not ascertained has been omitted from this table. Respondent had bought and sold the car in question but could not recall exact data for the interviewer.

for by the inquiry. The sequence of questions used in both the long and the short forms was in fact designed to uncover primary loans. Thus, research leads to a strong recommendation that this questionnaire (or any questionnaire in this field) should be designed to cover secondary loans, or else these loans should be excluded from study entirely.

The second possibility is that respondents may be reluctant to discuss secondary loans. "Everybody" buys a new car on credit, but not "everybody" has trouble with the payments or has to borrow on his car. It is instructive to note that no respondent in the Chicago sample denied ever having had any car debt. Discrepancies were found with regard to the existence and amount of particular loans, and some said their loans had been paid off; but no respondent insisted that he had paid cash for his car and had never borrowed against it.

It should also be noted that when respondents did report the existence of "our" loan, they reported the amount involved within a rather close margin of error. As has been previously noted there were 48 interviews in which the respondent did report the existence of what was fairly sure to be a car loan. In 33 of these interviews the product of the amount of the payments by the number of payments was within 5 percent of the corresponding amount from records. There were a few interviews, 8 of the 49, in which the respondent reported the original amount borrowed accurately but seems to have made some error in the report about the payments. That is, the amount borrowed was within 5 percent but the product of the amount by the number of payments was wrong by more than 5 percent. In only 8 of the 49 interviews was the amount borrowed wrong by 5 percent or more by both calculations.

Table 10 shows the relation between the debt according to state records and according to respondents' reports, interview by interview. The first section of Table 10 covers the 36 interviews in which the loan seems to have been a primary debt on the car. For these 36 interviews the mean of the respondents' reports was \$2,090 and the mean from the state records was \$1,998. The mean deviation was \$93. For 37 secondary loans, the mean of the respondents' reports was \$511 for those cases where the respondent did report or might have been discussing the loan under study. However, in about half the cases the respondent failed to report the loan. The mean for the official records for the entire group was \$520 (Table 11).

It may also be of some interest to estimate the proportion of the total list of debts which was in fact revealed by the respondents. This statistic is of somewhat doubtful interpretation because of the mixed nature of the list of loans. But for what it is worth, the mean of all records was \$1,156 and the mean of the respondents' reports

Table 10. Relation Between Debt According to State or County Records and Respondents' Reports (in dollars) in the 1957 Chicago Interviews

Respondents' report (1)	State records (2)	Deviation (1-2) (3)
GROUP I: Primary Loans		
Respondent seems to be discussing "our" loan		
1,955	1,875	80
2,700	2,833	-133
1,512	1,523	- 11
2,000	2,000	0
2,940	2,952	- 12
2,160	2,158	2
3,276	3,295	- 19
1,600	1,600	0
2,370	2,384	- 14
2,790	2,723	67
3,240	3,240	0
2,250	2,231	19
3,600	2,329	1,271
2,424	2,424	0
1,056	1,056	0
1,635	1,635	0
1,680	1,680	0
816	615	201
2,040	1,980	60
900	1,046	-146
2,797	2,487	310
1,671	1,522	149
3,504	3,512	- 8
1,686	1,686	0
1,062	885	177
864	742	122
1,560	1,608	- 48
1,464	1,342	122
1,680	2,100	-420
3,360	3,465	-105
1,476	1,403	73
1,380	1,383	- 3
Can't tell whether respondent is discussing "our" loan		
4,002	3,720	282
2,430	891	1,539
1,440	1,985	-545
1,920	1,612	308

Table 10 (Continued)

Respondents' report (1)	State records (2)	Deviation (1-2) (3)
GROUP II: Secondary Loans		
Respondent seems to be discussing "our" loan		
656	656	0
504	504	0
432	432	0
504	656	-152
525	525	0
198	229	- 31
660	656	4
224	210	14
672	660	12 ^a
-- ^a	217	-- ^a
1,500 ^b	2,021	-448
150 ^b	216	- 66
576	578	- 2
648	656	- 8
200 ^b	336	-136
234	229	5
500 ^b	656	-156
Can't tell whether respondent is discussing "our" loan		
500 ^b	629	-129
4,830	656	4,174
Respondent does not seem to be discussing "our" loan ^c		
(2,400)	414	
(1,080)	628	
(4,052)	260	
(3,090)	336	
(3,277)	432	
(1,923)	552	
(1,620)	656	
(1,536)	150	
(2,328)	656	
(2,880)	552	
(2,155)	280	
(1,620)	504	
(1,620)	384	
(3,660)	300	
(810)	656	
(2,460)	288	
(1,824)	485	

Table 10 (Continued)

Respondents' report (1)	State records (2)	Deviation (1-2) (3)
GROUP II: Secondary Loans (Continued)		
"Our" loan was not covered by the question asked		
(1, 890)	534	
(2, 700)	656	
(2, 610)	656	
GROUP III: Loans not Clearly Either Primary or Secondary		
Respondent does not seem to be discussing "our" loan ^c		
(3, 000)	1, 350	
(1, 200)	738	
(1, 920)	393	
(2, 940)	476	
(3, 300)	1, 949	
-- ^d	555	
(2, 160)	543	
(1, 104)	267	
(2, 820)	329	
(2, 460)	318	
(1, 800)	1, 056	
(2, 100)	656	
(2, 100)	413	
"Our" loan not covered by the question asked ^c		
(2, 208)	358	
-- ^e	552	
(2, 550)	534	

^aInformation as to amount of payments was given in the interview, but not as to number of payments or amount of loan.

^bRespondent reported directly the amount originally borrowed but information on payments was not complete.

^cNumbers in parentheses under "Respondent's report" refer to car loans reported in the interview other than the loan covered in the records.

^dRespondent says he never had such a car.

^eInformation not ascertained in the interview.

Table 11. Summary of Relation Between Debt According to State or County Records and Respondents' Reports in the 1957 Chicago Interviews

Type of loan	Respondents' reports		State or county records	
	Mean	Number	Mean	Number
Primary loans	\$2,090	36	\$1,998	36
Secondary loans	511	37 ^a	520	37 ^a
Loans not clearly either primary or secondary	0	14	670	14
All loans	965	87 ^a	1,156	87 ^a
Primary and secondary loans combined				
Respondent seems to be discussing "our" loan	1,583	53 ^a	1,543	53 ^a
Respondent failed to report "our" loan	0	34	512	34

^aExcludes respondents who reported the existence of a loan but failed to report the balance. Also excludes 1 respondent where the match between report and records is doubtful. This respondent reported a secondary loan of \$4,830; actual amount of the loan was \$656.

was \$965. These means were computed on the assumption that the respondent was not reporting the loan under study, that is, reporting zero for it, in the cases where non-report is indicated as the most probably interpretation in Table 10.

Accuracy of Interviewers' Impressions of Accuracy

It may be of some interest to compare the interviewers' impressions of the accuracy of response with the measure of accuracy of response obtained by comparing debt with the information in the interview. Could the interviewer tell whether she was obtaining complete and accurate information? Table 12 suggests that she could not. This table was prepared, of course, only for those interviews where the interviewer did not know the details about the loan. Of the 12 interviews in which the interviewer expressed the opinion that the response was accurate there were 8 in which the respondent seems to have failed entirely to report the loan under study.

Table 12. Interviewers' Impressions of Accuracy of Response by Degree of Agreement for Interviews Where Interviewer Did Not Know Details Only (Distribution of numbers of interviews)

Degree of agreement	All interviews	Impression of accuracy		
		Interviewer thought response was accurate	Interviewer doubted accuracy	No comment on accuracy
Reported "our" loan	18	4	1	13
Amount times number of payments is within 5 percent of recorded debt	10	2	1	7
Amount borrowed checks out within 5 percent but reported amount times number of payments is wrong by over 5 percent	3	0	0	3
Amount borrowed is wrong by either calculation	5	2	0	3
Failed to report "our" loan				
Does not seem to be discussing our loan	18	8	3	7
Total	36	12	4	20

Conclusions

Most of the errors found in this study were in interviews in which the respondent did not seem to have discussed at all the loan under scrutiny. About one interview in three fell in this group.

The results of the experimental manipulation were not conclusive. They do suggest that interviewers obtain more accurate information where they know in advance the details of the financial information. This result is not statistically on firm ground but the difference is in the predicted direction, and the logical presumption in favor of the hypothesis is so strong that we cannot reject it. It is perhaps more remarkable that in 16 interviews where the interviewer knew exactly what she was looking for, she was not able to elicit any mention of the loan under study by the respondent.

The data also seem to indicate that short questionnaires which focus on a particular topic are more successful than long questionnaires. This result, however, can be regarded as no more than suggestive if the Chicago investigation is considered in isolation.

As has just been indicated, the data cast doubt on the ability of interviewers to tell whether or not they are obtaining complete and accurate information.

The evidence also suggests rather strongly a difference in accuracy of report between primary and secondary loans. When combined with the results for the 25 exploratory interviews, the results in this section tend to support the view that it is possible to obtain data about primary loans on cars with a high degree of accuracy in a survey which concentrates on automobile financing. More difficulty is to be expected in surveys concerned with secondary loans.

The fact that it was impossible to distinguish accurately between these two types of loans on the basis of the official records was a serious handicap in the analysis of the data. The difficulties found in using records in county courthouses in Chicago thus contrast with the much more favorable experience in three counties in Michigan. Certainly, any future studies of car debt should be designed to avoid the type of difficulty which was encountered in Chicago.

A Special Check Using Data

from the 1956 Survey of Consumer Finances

Purposes of the Study and Description of Procedures

In conducting special interviews for a study such as this one it is difficult to conceal from the interviewers that the study is an investigation of a special sample of people about whom certain information is known in advance. Interviewers are certain to wonder from what list the sample of names was drawn, and they are likely to

notice that everybody in the sample owns a late model car and reports owing money on it. To reproduce exactly the normal interviewing situation is impossible in such a situation. But the questions remain: "Do interviewers in a study such as the present one behave differently from the way in which they behave in a regular survey?" and "Are the errors in such a survey different from those found here?"

An attempt has been made to answer these questions by obtaining data from state title offices in those states which maintain such records and were willing to cooperate. Names of respondents who bought new cars in one of the annual Surveys of Consumer Finances were sent to the motor vehicle departments of the states involved, asking for information as to whether there was a lien and as to the amount of the lien. A total of 33 names were found for whom the state involved reported a lien on a purchase of a new car. It is appropriate to regard this group of 33 interviews as if they had been selected originally from the records of the several states and then interviewers had visited them. The data which resulted may be compared with the data in the exploratory interviews and with the data from the special field experiment in Chicago. The 33 interviews with respondents in the Survey of Consumer Finances represent people who were much more widely scattered geographically, of course, than the respondents in the other studies reported in this chapter.

Measures of Error

The results of this special check are reported in Table 13. As in the studies of car debt reported earlier in this chapter, the error is the result almost entirely of interviews in which the respondent reported no debt. Of the 33 respondents, 25 reported to the interviewer that they had incurred a debt on their car at the time of purchase while 8, or 24 percent, failed to mention such a debt. These figures alone would tend to produce an underreporting of mean car debt for the group as a whole of 24 percent. The mean debt for the sample as a whole from the state records was \$1,516, while the mean debt from the interviewers' reports was \$1,059. Thus, the respondents' reports represent an understatement of 30 percent. The difference between 24 percent and 30 percent results from a small average understatement of debt in those 25 interviews in which the respondent did report the existence of the debt on the car.

Conclusions

How do the interviews from the 1956 Survey of Consumer Finances compare with the exploratory interviews and the interviews taken in the field experiment in Chicago? The proper comparison refers to the original loan on the car incurred at the time of purchase, since

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Table 13. Relation Between Debt According to State Records and Respondents' Reports (in dollars) in the 1956 Survey of Consumer Finances

Respondents' report (1)	State records (2)	Deviation (1-2) (3)
Group I: Reported no debt		
0	2,508	- 2,508
0	2,250	- 2,250
0	2,190	- 2,190
0	1,353	- 1,353
0	937	- 937
0	850	- 850
0	829	- 829
0	521	- 521
Total 0	11,438	-11,438
Mean 0	1,428	- 1,428
Group II: Reported debt		
3,069	3,174	- 105
2,595	2,509	86
1,900	2,284	- 384
1,602	2,225	- 623
1,520	2,160	- 640
2,253	2,114	139
1,656	2,102	- 446
1,960	1,960	0
1,830	1,893	- 63
1,716	1,782	- 66
1,623	1,623	0
1,524	1,576	- 52
1,485	1,485	0
1,400	1,471	- 71
1,404	1,404	0
1,203	1,203	0
690	1,120	- 430
1,085	1,085	0
1,064	1,064	0
882	882	0
600	865	- 265
726	708	18
414	694	- 280
438	662	- 224
312	559	- 247
Total 34,951	38,604	- 3,653
Mean 1,398	1,544	- 146
Groups I and II combined		
Total 34,951	50,042	-15,091
Mean 1,059	1,516	- 457

it is only this loan which was covered systematically in all three studies. It will be recalled that in the preliminary interviews in Michigan only one respondent out of 25 failed to report his car debt. Of the respondents in Chicago, there was not one who denied all car debt out of the 92. Yet of the respondents in the 1956 Survey of Consumer Finances, 24 percent failed to report the original debt incurred on their car when they purchased it. What makes the difference?

There are several possible explanations, and it is not possible to rule out the simple explanation of chance fluctuation. After all, the numbers of interviews involved are small. Nevertheless, there are additional data to support some of these results. There is other evidence, for example, that car debt in the Surveys of Consumer Finances is understated by an amount not very different from that found in the special check on the 33 interviews taken in 1956. Why do the results in the other studies seem to be more satisfactory than those in the Surveys of Consumer Finances?

One possibility is that the respondents in the special studies were in some way unusual. It is known that the respondents in Chicago included a large group who had incurred not only primary but also secondary debts on their cars. The interpretation already has been suggested that these people may be willing to reveal the primary debts while tending to conceal the secondary loans. It is possible that they are more willing to reveal the primary debt than the population in general.

This explanation, however, does not apply to those respondents in Chicago for whom there were only the primary loans. This group represents much less than the full sample, and, indeed, it is not possible to tell exactly how many of the respondents fall in the category of those who had incurred only a primary loan. They also may be more willing to reveal the primary debt than the population in general.

Another possible explanation could be made in terms of some peculiarity of the interviewer involved. A favorable interpretation would be that a particular interviewer was unusually skillful. A more skeptical way of looking at the matter would be to suspect that the interviewer in the exploratory interviews made some special use of her detailed knowledge of the individual loans in such a way as to bias the results of the inquiry. This hypothesis, however, will not explain the results in Chicago. In that city four interviewers were used and they took approximately equal numbers of interviews.

The most probable explanation of the results seems to be that the crucial difference between the Survey of Consumer Finances and the special interviews was that in the latter the interviewer was able to focus her attention upon a single topic, car debt. This interpretation suggests a general proposition: when an interviewer has a clear

grasp of what is wanted in an interview and can focus his attention upon it, he tends to be successful. According to this view, it is important both that the interviewer have a grasp of what is wanted and that he spend time enough on that topic to cover it adequately. He must spend enough time with the respondent to be certain that the respondent understands what the interviewer wants and that he gives a satisfactory answer. When, on the other hand, the questionnaire covers a large number of topics of equal importance, as is the case in the Surveys of Consumer Finances, the interviewer tends to accept the information with less of an attempt to make sure that it is correct. He does not keep the respondent talking about the one topic. He relies on the questionnaire as it is written to do the job. The results may not justify this confidence in the questionnaire.

It should be emphasized that this interpretation is tentative. If it is correct, it has major implications for the design of surveys. It implies that the researcher has a choice between a large number of items of information, each with a relatively low level of accuracy, and a small number of items of information, each with a relatively high level of accuracy.

IV. INTERVIEWS IN A LABORATORY

At this stage in the progress of the research two things were clear to the investigators. In the first place, it was evident that substantial errors of response occurred in many interviews. The evidence from the studies of car debt and from the checks of survey data against outside aggregates made it evident that there was a serious problem of response error. In the second place, it became apparent that what took place during actual interviews was crucial for the research. The investigators felt the need to make an intensive study of a number of individual interviews. They felt that it was important to scrutinize as carefully and as sensitively as possible what took place in the interview situation.

Purpose of the Study and Description of Procedures

It was with this same general purpose of better observation in mind that the attempt had been made in the exploratory interviews to record on tape actual interviews in the field. As has already been noted, this experiment was less than a perfect success from a technical point of view. The tape recorders did not work well. It seemed probable that further attention to the mechanisms employed could remove this difficulty. The investigators also felt that many cues would be lost if they could not see the interview as well as hear it.

It was decided that the most satisfactory arrangement would be to have the interviews take place in a psychological laboratory. For this purpose the investigators were fortunate enough to obtain access to the laboratories maintained by the Research Center for Group Dynamics. These laboratories are so arranged that it was possible for several observers to sit behind a one-way glass screen in a separate observation room in order to observe the interaction between interviewer and respondent. Microphones in the ceiling of the interviewing room attached to an audio system carry sound to the observation room, but the observers there could neither be heard nor seen by the interviewer and the respondent. A tape recorder was placed in the interviewing room so that it was not in the respondent's view, although the respondent was aware of its presence, and the microphone for the tape recorder lay in full view on the interviewing table. The respondents also were informed of the presence of the observers in the next room.

These arrangements made possible the most careful observation of the interview itself and thus led to the development of new hypotheses about the causes and possible cures for response error.

Selection of Respondents

In order to preserve the absolute anonymity of the respondents throughout the entire procedure, respondents unknown to the interviewer or the observers were obtained through a contact man living in a community near Ann Arbor. The persons selected were married men with children, employed, with incomes in or near the highest tenth of the income distribution. Also, if possible, the respondents were persons with fairly substantial liquid asset holdings. The respondents were told by the contact man that the interview was being conducted for the purpose of testing interviewing techniques and that the information to be asked would be financial. They were asked not to look up any of their records. In the initial interviews it was found that one respondent did not follow these instructions, and in the later interviews respondents were not told in advance the subject matter of the interviews. The respondents were paid \$10 if they appeared for the interview and also returned a check sheet afterwards. This payment was arranged through the contact man in order to insure the continued anonymity of the respondents.

Post-Mortem Interviews

After the conclusion of the regular interview one of the observers entered the interviewing room, was introduced to the respondent, and then interviewed him about the main interview. No fixed questionnaire was prepared in advance for the post-mortem interview, but suggestions were made by the various observers during the course of the interview itself as to the questions that might be raised during the post-mortem.

Although the post-mortem interview was relatively unstructured, the interviewers did gradually work out a pattern of questions to be asked. A typical series of questions asked in the post-mortem interview was as follows:

- (1) How good a picture did we get, for example, of your financial situation, of your buying plans, of what you expect to do over the next year? Were there some things we missed?
- (2) What did you expect that you were going to do when you got here tonight?
- (3) Were there any of the questions that you were asked that bothered you or you wish somebody hadn't asked you?
- (4) Was there anywhere in the interview where you thought the interviewer was digging too hard?
- (5) You appeared to give information that was quite precise. I wondered if you had to bet \$25 how accurate would you expect to be on this figure?
- (6) I was wondering about how well we would have done, for example, if we had come to your house and talked to your wife about these things?

Special Check After the Interview

During the post-mortem interview the respondents were asked to take home the completed interview schedule and to check their recall statements on liquid asset holdings against their actual records. They were then asked to return the corrected schedules to the Survey Research Center by mail.

Development of Hypotheses as the Laboratory Interviews Progressed

In the first stage of the work in the laboratory, the questionnaire used was a standard instrument: it was the schedule used in the most recent Survey of Consumer Finances, the 1958 Survey. The interviewers were regular members of the field staff of the Center who had used that questionnaire in interviews taken in the normal course of their work a few months earlier. It was hoped in this way to reproduce in the laboratory as closely as possible the conditions of interviews in the field. Important differences, of course, remained between the field situation and the laboratory situation. In particular it was not possible to reproduce the crucial first stages in which the interviewer in the field must obtain the cooperation of the respondent. The respondents in the laboratory already had agreed to cooperate. What it was hoped would be reproduced was the later stages of the interview itself.

How successful was this attempt? The observers felt that there was a tendency for both the respondents and the interviewers to be somewhat nervous and ill-at-ease during the session with the regular field interviewers. The post-mortem interviews typically were conducted in a more relaxed atmosphere. But the observers felt that the procedure did offer an opportunity to observe the flow of an interview. It was possible to watch as a professional interviewer used a fixed questionnaire and standard probing techniques to obtain data from a respondent.

The advantages of a fixed questionnaire are very great. The use of a standardized instrument for data collection makes a major contribution to the reproducibility of the research process. The importance of conducting research in such a manner that it can be replicated hardly needs emphasis.

Yet it was the feeling of the observers in these first interviews that the fixed questionnaire sometimes got in the way of the communication between interviewer and respondent. There were situations in which the rigidity of the Survey of Consumer Finances questionnaire made it more difficult rather than easier for the respondent to give the desired information. The interviewer could not stick to the questionnaire if she wanted to obtain for the analyst a comprehensible picture of the actual financial situation.

The importance of the interviewer in the interviewing situation was noted by the observers. Such characteristics as the interviewer's persistence in obtaining a complete answer to the entire question, the confidence with which the interviewer approached particular questions (specifically in one case, the series on liquid assets), the interviewer's ability to enlist the aid of the respondent in helping straighten out difficult financial questions, and the ability to use probes with ability and informality all were noted to play an important role in the progress of the interview.

From the point of view of the analyst it is frequently necessary to obtain answers to several questions which may seem similar to the respondent. In some instances respondents appeared bored by what they seemed to feel were repetitive questions.

It was also noted that the time spent by the interviewer in taking notes acted as an interruption to the flow of the interview. Respondents, of course, realized what was going on, and in at least one instance a respondent reacted to this situation by dictating some of his answers to the interviewer as one dictates to a secretary. After three interviews had been taken using the standard techniques brought in from the field, and after having subjected them to extremely intensive scrutiny, the investigators felt that this particular line of inquiry had reached the point of diminishing returns. The time had come to experiment with alternative techniques of interviewing in the laboratory.

Three experimental approaches were tried out. Of these, the first is the most interesting from the point of view of its relation to further research for it led directly into the field experiment conducted later in the year. The technique used involved the opposite extreme from the use of a fixed questionnaire. It was developed in part in response to the feeling that the standardized questionnaire had worked only imperfectly in the preliminary interviews just described. In the first attempts at this new technique the interviewer approached the respondent without any fixed questionnaire or answer form. The interviewer did have in mind in some detail the objective of obtaining a report of the respondent's financial affairs similar to that obtained in the course of the usual interviews in the Surveys of Consumer Finances. But the interviewer entered the interview situation with no fixed ideas as to how the information was to be collected. The underlying idea was to bring the respondent to describe his own financial affairs in his own way.

Behind this approach lay the general proposition that people are interested in their own financial affairs. Hence, it was argued that in an interview situation in which anonymity was guaranteed people should find it a pleasant and rewarding experience to discuss their financial affairs. It was hoped to interest the respondent by letting him take his own way through this general area. The goal was a high

degree of involvement of the respondent in the research process. It was anticipated that under these circumstances, first, he would talk more freely; second, he would remember his affairs more completely and more accurately; and third, he would give the investigators a more complete understanding of how he operated financially.

In the laboratory situation the interviews conducted using this approach seemed to work out very well. After some consideration it was decided that this version should be given a trial in a field situation. The attempt was made, with the results which will be described in Chapter V.

A second technique which was tried out in the laboratory represents a kind of intermediate step between the structured interview as used in the Survey of Consumer Finances and the completely unstructured approach just described. This technique, like the standard questionnaire in the Survey of Consumer Finances, made use of fixed questions. An attempt was made, however, to organize the fixed questions around the interests and experience of the respondent more closely than is done in the Consumer Finances questionnaire. The new questionnaire, after some preliminaries about the composition of the household and the occupation of the respondent, approached the topic of his finances by stating, "We're interested in how people handle their money." The respondents were asked how often they got paid, whether they had any other money coming in, who received it, in what form the money was paid to them, and what they did with it. Thus, people told the interviewer whether they deposited their checks in a savings institution or cashed them elsewhere. The next sequence concerned who in the family paid the bills, how these bills were handled, what kind of budgeting system the family had, and how well it functioned. From this the questionnaire led into a discussion of the regular payments which people make. The next sequence concerned unusual large expenses in the last year or so. The next major section concerned the different bank accounts the family had, what they were used for, and how the family handled its different accounts. For example, respondents were asked questions about whether they kept minimum amounts in their checking accounts, and if so, what these minima might be. These sequences led up to specific questions about total liquid asset holdings.

This type of interview seemed also to work successfully in the laboratory situation. It was not chosen for experimentation in the field primarily because it represented less of a departure from the normal interviewing procedure than the previously described technique. It was felt that more could be learned from the more radically different questionnaire. The approach, however, influenced the design of the questionnaire used in the study of cash borrowers discussed in Chapter VI.

The third experimental questionnaire tried in the laboratory also represented a more moderate departure from the standard procedure. This questionnaire followed the Survey of Consumer Finances approach of first asking for the composition of the household and the economic attitudes of the family. These topics were followed by questions about the occupation and income of the family members taken directly from the Survey of Consumer Finances but asked earlier in the interview than is the standard procedure in that survey. The principal unique feature of this questionnaire was that the next sequence emphasized changes during the previous year. Respondents were not asked to tell the interviewer about the amount in their savings accounts or the amount of their holdings of other forms of assets. They were asked a series of questions about the changes in their balances and the changes in their other assets and the large purchases which they made during the year. They were also asked general questions about how things had worked out for them during the year and any unusual experiences or financial problems that they might have had.

This questionnaire also seemed to be successful in the laboratory situation. It was decided to use the first unstructured questionnaire rather than this version in the field experiment for the reason noted earlier: that more might be learned from the use of a dramatically different form of interview than from a relatively moderate change in the research procedure.

As it turned out (this will be discussed in more detail in the next chapter) the unstructured interview was not a success in the field situation. This lack of success raises a question about what might have happened if one of the other versions had been developed systematically and tried out on a large scale in a field experiment. The answer, essentially, is that it is impossible to know what might have happened without actually conducting additional field experiments. It would have been necessary to devote an entire experiment to each version of the questionnaire since the hypothesis concerned the result of the development of questionnaires with basically different structures. One cannot try two basic designs of questionnaire in the same interview. The investigators possessed only limited resources in terms of the limited possible number of field experiments. They have become increasingly aware of the greater efficiency of developing and testing theory as to the causes of response error rather than of testing one technique of data collection after another without being able to generalize from one procedure to the next. The work described in Chapter VIII and in Part Four reflects this increasing interest in the problem of how to develop a theory of response error.

From this point of view two observations may be made about the experience in the laboratory. The first observation is that

everything seemed to work in the laboratory. All of the varied approaches seemed to bring out the data required. This generalization rests on very few cases and it is possible that respondents seemed more cooperative than they really were, but it does fit the observers' sense of what they saw. If this interpretation is correct, the question arises, "Why did things go better in the laboratory than in the field?" The significant difference may be that in the laboratory the respondents came already committed to help.

The second observation is that there was one respondent who cooperated reasonably well during the interview but became quite disturbed about it in retrospect, as the investigators learned through the contact man. The respondent refused to fill in the form calling for a special check on his liquid asset holdings. He was very concerned about what use might be made of the interview. The reason, which became apparent, was that he did not wish some of his transactions to become known for fear that the information might injure him if it came to certain persons. In this individual the desire to conceal his financial affairs was a powerful motivating force. The importance of the motivation of respondents will be discussed at more length in Chapter IX.

The investigators emerged from this experience with the feeling that careful observation in a laboratory situation could be useful but that after close scrutiny of a dozen or so interviews they had little more to learn from it. After a total of 15 interviews they turned to the planning of field experiments, with the feeling that the laboratory experience had been of assistance and might be useful in other projects, especially in the development of new questionnaires.

PART THREE
THREE FIELD EXPERIMENTS

V. SAVINGS ACCOUNTS: THE FIRST FIELD EXPERIMENT

In the fall of 1958 the Survey Research Center undertook the first of a series of three field experiments. These studies are the topics of the next three chapters. After completion of the personal interviews in two of the studies, respondents were sent a mail questionnaire. This reinterview will be reported in Chapter VIII. The first field experiments involved interviews with a group of respondents known to be owners of large savings accounts. It was made possible by the cooperation of a group of financial institutions on the East Coast.

Purposes of the Study and Description of Procedures

Purposes

This study, like other field experiments in this series, had three main purposes: (1) to measure the accuracy of information which people give to interviewers about their finances, (2) to test the difference in response error resulting from the use of different techniques of interviewing, and (3) to measure the correlation between the observed response error and other variables. Such correlations, it was hoped, might lead to new and improved interviewing techniques, as well as to indications of the accuracy of comparisons of different sub-groups in the population using existing techniques.

The Need for Anonymity

When this project was first under discussion, it was agreed by all concerned that a prerequisite for such an investigation was careful preservation of the anonymity of the individual respondents. Financial institutions quite properly regard information about the financial affairs of their depositors or clients as confidential. How was it possible, then, to interview a sample of depositors while maintaining complete anonymity for them?

The Survey Research Center and other organizations which conduct sample surveys are basically concerned with protecting the anonymity of their respondents. As a matter of routine every effort is made to make certain that statements made by respondents to interviewers never can be associated with the actual persons who made them. The reports from sample surveys customarily appear in the form of statistical tabulations. It is obviously impossible to identify any individual in such a tabulation. From time to time in the report of a survey a quotation may appear, but such quotations are always attributed to an individual who is described only in the most general terms, as for example, "A truck driver, age between 35 and 44, living in a large city in the northeastern part of the United

States." Indeed, the very existence of a sample survey organization depends upon the ability of its interviewers to obtain information from respondents, and this in turn depends in large part upon the interviewers' ability to assure their respondents that the interviews will be kept confidential.

Thus, the problem of insuring the anonymity and confidentiality of financial records about individuals was not actually so difficult to solve as it might appear at first glance. Essentially, what was required was to develop a procedure for transferring information from one confidential file to another. The method actually worked out involved the following steps in the field experiment described in this chapter:

- (1) The participating savings institutions selected samples of the owners of savings accounts by a method to be described in the following section.

- (2) The institutions transmitted the names and addresses thus selected to a central association.

- (3) The names and addresses thus chosen were mixed together for the several cooperating institutions and then transmitted by the association to the Survey Research Center.

- (4) Interviews were taken with a large fraction of the persons whose names had been transmitted to the Center. The interviewers were not informed as to the origin of the list of names. Many of the interviewers guessed that the list had come from financial institutions in some way, but this was only a guess on their part.

- (5) The Center in turn submitted back through the association to the cooperating institutions a list of the names and addresses of those persons actually interviewed. This list showed the balance in the account in question on certain dates as reported to the interviewer. The Center maintained records arranged by code numbers.

- (6) The savings institutions sent reports back to the Center, arranged by code numbers. These reports contained indications of the accuracy of the reports.

In this way it proved possible to obtain measures of the accuracy of report in the interviews while at the same time giving full protection to the individuals who cooperated in the study.

Sample Selection

The sample design was intended to yield a sample of owners of large savings accounts selected in accordance with strict probability procedures. The details of the sample selection varied somewhat from one institution to another, depending on differences in the way the files of the institutions were organized, but the essentials of the procedure were as follows.

Savings institutions customarily identify savings accounts by

number. Both the smallest number ever assigned to a savings account and the largest are known. The basic method of sample selection is to select account numbers within this known range. Numbers which refer to accounts which have been closed automatically fall out of the sample.

In addition to closed accounts the following types of accounts were dropped out of the sample: (1) Christmas savings accounts, (2) accounts of minors, (3) accounts held in trust, (4) organization accounts, (5) accounts the owners of which live outside the area, and (6) accounts with a current balance at the time of selection of less than \$1,000. Thus, the selected accounts consisted of individual or joint accounts owned by one or two adults who lived in the metropolitan area and whose balance was \$1,000 or more.

This procedure was more exacting and, therefore, more difficult for the cooperating financial institutions to carry out than some more casual method of selecting the sample. It had the merit, however, that the final sample was a probability sample of all depositors with the specified characteristics of the financial institutions in question.

Interviewing Procedures

As has been mentioned earlier, this field experiment was designed to test two interviewing procedures. These procedures require detailed description to be understood. The first was a comparison of structured and unstructured interviews. In one-half of the interviews the questionnaire used was a modified form of the questionnaire used in the Survey of Consumer Finances. This is a highly structured questionnaire, a copy of which appears in Appendix B. The interviewer first fills out a form describing the composition of the dwelling unit, that is, what individuals live there and what their relation is to the head of the dwelling unit. The interviewer determines whether any of these individuals constitute a separate spending unit. The next sequence consists of a page of questions of the fixed-question, free-answer type concerning the individual's general economic attitudes. These questions concern his evaluation of his own personal financial situation and of the general economic situation in the country as a whole. Another page of questions is devoted to the housing arrangements of the unit. Automobile ownership and purchases and purchases of other major durables are then covered in some detail. There is a section on personal debt. Careful questions cover in detail the income of the family and the occupations of the various employed members. Finally, the interviewer asks a series of questions covering each of the liquid assets owned by the members of the family, with separate questions about savings bonds, checking accounts, saving accounts in banks, and other types of savings accounts. Following this standard series of questions a special series

was introduced intended to shed some light on problems of the measurement of response error. The results obtained from these questions will be discussed later. In addition, detailed demographic information about the unit interviewed was obtained at the conclusion of the interview.

The other half of the respondents were interviewed with an unstructured approach. The interviewer was given a form consisting of four printed pages on which she was asked to record certain specific information. This information included the same amount of detail about liquid asset holdings which was asked for in the structured questionnaire. Otherwise, the information asked for was much less specifically described. For example, one part of the form provided a place to record large expenditures in the last twelve months with room for four items. With regard to income, the interviewer was asked to record the income of the husband, other income of the family, and total family income. A copy of this form also appears in Appendix B.

The instructions to the interviewers using the unstructured approach were to ask the respondents to discuss with them their financial situation. No set questions needed to be asked. What topics were to be covered in detail, the manner in which they were to be covered, and the sequence in which they were to be covered were left up to the respondent. The interviewer's role in the situation was seen essentially as one of encouraging the respondent to talk about how his family handled its financial problems. It was hoped by the investigators that this approach would lead to greater respondent interest in the survey, and hence, to greater effort by respondents to explain their financial situations in an intelligible and accurate manner, than in the structured interview. The following description of the objectives of this approach was written down by the investigators prior to the interviews themselves:

"We may be successful if we indicate to the respondent the general topic we want him to cover and let him take his own way through the facts. Thus, we should ask general, open questions. We should give the respondent time, and let him ramble a bit if he wants to. In a word, we should try for factual data the techniques used for attitudes in many surveys. There is some evidence from the psychological studies of testimony which suggests that this approach may yield more accurate data than a succession of specific, detailed questions.

"The respondent-oriented approach also has implications for the types of questions asked. Questions, according to this view, should be adapted to the respondent's situation as he thinks about it. To develop this type of question we need to know how respondents classify their bank accounts in their own minds. It would be consistent with this approach to let the respondent indicate who in the family is the person best able to give us information on these

topics. We may also ask about the purposes for which the different accounts are kept as the respondent perceives these purposes. Knowing more about purposes, we may be able to ask more intelligently about transactions.”

The second manipulation in this field experiment took place a number of months after the original interviews and involved the reinterviewing of the original respondents. The first wave took place in the fall of 1958, the second, in the spring of 1959. The purposes of this manipulation were described early in 1959 as follows:

- (a) In some interviews rapport is better the second time. The respondent is convinced of the good faith of the interviewer by such things as receiving in the mail a reprint of an article based on the first survey.
- (b) The facts are often complex. For example, there may be several accounts, some joint, involving people who are present in the family at one date but not the other.
- (c) People may forget information. Frequently their reports are inconsistent because they forget part of the facts at one time and remember them at another.

This interpretation leads to the proposal that we should ask for the same information in several ways and ask the respondent to reconcile the discrepancies. For example, we can ask for the same data in three ways as follows:

- (a) In the first stage of the interview we ask for correct bank account at date (1).
- (b) Six months or a year later we ask for memory of assets at date (1), for assets at date (2), and for the change.
- (c) At date (2) we ask for larger transactions involving the bank account between (1) and (2).

It was in order to test the usefulness of reinterview in gathering data about the situation at the time of the first interview that the attempt was made to reinterview all of the respondents from the fall survey in the late spring of the next year. The procedure used was that described earlier. It yielded for most interviews three reports of the fall balance: the original report in the fall, a report of that same balance from memory in the spring, and, frequently, a revised report in the spring based on the respondent's resolution of any conflict between the two previous reports.

Error of Non-Response

The response disposition for the 168 selected addresses at which interviews were attempted is shown in Table 14. The 168 addresses exclude those addresses for which the address reported by the

Table 14. Response Disposition in Relation to Size
of Actual Balance in Account in Fall, 1958
(Percentage distribution of accounts)

Response disposition in Fall, 1958 (for first interview)	All accounts	Size of actual balance in Fall, 1958				
		\$000- \$999	\$1,000 - \$1,999	\$2,000 - \$2,999	\$3,000 - \$4,999	\$5,000 or more
Interviews	65	31	74	55	73	65
Non-interviews	35	69	26	45	27	35
Refusal	20	61	11	17	21	20
Other	15	8	15	28	6	15
Total	100	100	100	100	100	100
Number of accounts	168	13	47	29	33	46

savings institution was no longer correct, usually because the depositor had moved. Preliminary weeding out of such addresses was accomplished by eliminating from the sample all cases in which the name and address did not check against the most recent telephone book. A few correct addresses of people with no telephones were eliminated, no doubt, in this process, but this number was probably small. Nobody with less than \$1,000 in his account fell in the sample, and it is unlikely that many people with this much money have no telephone. Some further elimination of addresses took place in the field when interviewers found people had moved recently. The final total, as shown, of addresses in the sample at which interviews were attempted was 168.

At 65 percent of these addresses interviews were completed. This response rate is substantially lower than the national average of about 85 percent on the Surveys of Consumer Finances. It is also lower than the local response rate in the same area with approximately the same interviewers for the Survey of Consumer Finances, which was 84 percent on the 1957 Survey and 75 percent on the 1958 Survey.

Is there a relation between the size of the actual balance in the account and the response rate? Table 14 shows no evidence of such a relationship. The number of observations in the table is not large, but, as far as the data go, the interview rate does not vary systematically with size of account.

Table 15 shows the relation between the mean balance in the account and the response disposition. As might be expected in the light of the data in the previous table, there is no evidence of variation (beyond that attributable to chance) in the means for different groups of accounts classified by response disposition. It should be kept in mind that all respondents in this sample had a balance of \$1,000 or more on the date when the sample was selected. It may be that people with balances at this level are difficult to interview as a group compared with the general population, but that there is no tendency toward further difficulty as the balance goes over that level. This topic will be discussed further in Chapter VII in connection with the interviews taken during the third field experiment.

There is definite evidence, however, that the response rate for the unstructured interviews was lower than that for the structured interviews. As shown in Table 16, the response rate was 77 percent for the structured interviews and only 54 percent for the unstructured or experimental interviews. Even with the size of sample involved, this difference is significant at the 95 percent level of confidence.

This result was a surprise to the investigators. How should it be interpreted? It must be kept in mind that the objectives of the two approaches were similar in terms of the type of data to be gathered.

Table 15. Response Disposition in Fall, 1958, in Relation to Mean Actual Balance in Account in Fall, 1958

Response disposition in Fall, 1958 (for first interview)	Mean actual balance in Fall, 1958					
	Excluding certain accounts of \$9,000 or more ^a		Including certain accounts of \$9,000 or more		Assumption	
	Mean	Number	Mean	Number	Mean	Number
Interviews	\$3,663	106	\$3,810	109	\$4,057	109
Non-interviews	3,122	55	3,588	59	4,266	59
Refusal	3,155	32	3,557	34	4,146	34
Not at home	2,512	20	3,193	22	4,102	22
Other	6,833	3	6,833	3	6,833	3
All accounts	3,478	161	3,732	168	4,131	168

^aCertain actual balances are known to the investigators only in open-ended brackets such as "\$9,000 or more" or "\$10,000 or more." For these cases it is a moot point whether they should be included in the mean calculations at all, and if included what values should be assigned. The different columns show the results of different procedures.

^bUnder Assumption A, these large accounts were included at their minimum known value, i. e., at \$9,000 or \$10,000.

^cUnder Assumption B, these large accounts were included at twice their minimum known value, i. e., at \$18,000 or \$20,000.

Table 16. Response Disposition for First Interview (Fall, 1958) in Relation to the Experimental Manipulation

Response disposition for first interview	Type of interview in fall			
	Structured		Unstructured	
	Percent	Number	Percent	Number
Interviews	77	63	54	46
Non-interviews	29	19	46	40
Total	100	82	100	86

It must also be kept in mind that the decision of the prospective respondent to grant an interview or not to grant one is made before the interview proper begins. Respondents rarely break off an interview once it is launched. The difference, then, must be in the approach of the interviewers in the early stages of their relation to the respondents.

The interviewers did not feel that the unstructured questionnaire was a success. They reported feeling more confident of themselves with the structured questionnaire. Evidently this difference in confidence was somehow communicated to the respondents and led to failure to complete the interview.

One view is that the personal financial area, especially with regard to savings accounts, is extremely sensitive and that such topics just are not discussed with strangers under normal circumstances. In order to effect discussion, the situation must be made unique: it must be non-personal--highly structured in specific ways (so that the respondent is not talking to another person but to an object). One means of accomplishing this is to use a highly structured questionnaire. Once the interviewer has had a few opportunities to use an unstructured questionnaire and becomes aware of its deleterious effects, her self-confidence is destroyed. The consequent lack of self confidence is communicated to later prospective respondents, resulting in unsuccessful approaches.

An alternative view is that the difficulty is not so much in the nature of the unstructured approach as in the training of the interviewer. The interviewing staff on this project consisted of people with training and experience in working with structured questionnaires such as that in the Survey of Consumer Finances. They were given training in working with the unstructured approach but not enough training to handle the situation. If they had started out with more self-confidence, they would have been more successful.

A variant of this position is the view that the interviewers

should have been given either less training with unstructured interviewing, or much more training. With less training they might have asked structured questions but in an order which varied from one respondent to the next. This procedure might well be less threatening to the respondent than a non-directive approach. With more training--probably a good deal more training--they might have been able to handle the anxieties which they aroused. As it was, they aroused the anxieties and did not handle them successfully; these anxieties were communicated from respondents to interviewers and then to prospective respondents. It is possible that both of these views are correct. It may be true both that the topic is one not easily handled by an unstructured approach and that with training interviewers can use the unstructured approach with greater success.

Since the effect of type of interview on response rate in the fall was so pronounced, the question arises of whether there were any carry-over effects from fall to spring. Of the people who were actually interviewed in the fall, were those who had gone through one type of interview more likely to consent to a reinterview than those who had gone through the other type of interview? Table 17 shows that there was in fact little or no carry-over of this sort. The response rate in the spring was little influenced by the type of interview in the fall.

Response Error

The results of the fall interviews in terms of response error are summarized in Table 18. The system of classification of types of

Table 17. Response Disposition for Spring
Reinterview in Relation to
Type of Interview Used in Fall
(Percentage distribution of interviews)

Response disposition for spring reinterview	Type of interviews in fall		
	All interviews	Structured	Unstructured
Reinterviews	73	76	70
Non-reinterviews	27	24	30
Refusal	17	14	20
Other	10	10	10
Total	100	100	100
Number of interviews	109	63	46

response error used in this table requires an explanation. The classification was empirically derived. It was based upon the responses to the questionnaire itself and the limited information given to the investigators by the savings institutions. The three major classes into which people could be categorized were exclusive and made conceptual sense relative to the investigators' germinating theoretical views about response error: The respondent failed to report the account at all, he admitted the existence of savings but the relevant balance was not ascertained, or the respondent reported a balance for what appeared to be "our account." It was felt that the dynamics were different for each of the major categories, that the factors operative were common within categories but might be different between them.

The subcategories were also empirically derived, but these, too, made conceptual sense. Within the "failed to report" category, there were two sub-classifications possible which described all of the respondents involved; the same thing was true for the "reported account, balance not ascertained" category. (See Table 18).

The subcategories for those who reported a balance were selected for different but practical reasons. It might be argued that it would have been more appropriate to work with the percentage error rather than an absolute amount of error. If the investigators had been in a position to make a free choice, they probably would have used percentages. The choice, however, was not free. For most accounts the accuracy could be verified only within \$1,000. It is possible to state that a certain report was correct within \$1,000, while it is not known exactly what the percentage error is for a given report. Supplementary Tables 1 and 2, Appendix D, show the full details available to the investigators. For most purposes, however, the information shown in Table 18 and the following tables and chart may be sufficient. The main results, then, were as follows.

First, 24 percent of the respondents failed to mention the account in question. This type of error is serious since in an investigation with no special check on accuracy these respondents would be assumed to have no such account. (Most of these respondents did mention other savings accounts, as will be discussed in more detail later.) Some of these respondents, about 6 percent of the sample, seem to have failed to report an account which they owned jointly with some third party other than the respondent or his spouse. For example, the account may have been in the name of the wife and her mother. It is probable that in most cases this account was in fact the account of the mother for all practical purposes. In a sense, then, the daughter would have been quite right not to report the account. On the other hand, about three out of four of the missed accounts belonged to the respondent or his spouse or to the two jointly.

Second, 19 percent of the respondents reported the existence of

Table 18. Response Error in Report of Fall, 1958, Balance in Relation to Experimental Manipulation (Percentage distribution of interviews)

Response error in report of Fall, 1958, balance	All interviews	Type of interview in Fall, 1958	
		Structured	Unstructured
Failed to report account	24	22	28
Account owned by respondent or spouse or the two jointly	18	19	17
Account owned entirely or in part by someone other than respondent and spouse	6	3	11
Reported account, balance not ascertained	19	15	24
Reported account but refused to state balance	14	10	20
Reported a total in several accounts but would not break it down	5	5	4
Reported balance for account	57	64	47
Underreported by \$1,000 or more	16	16	15
Overreported by \$1,000 or more	7	11	2
Accurate within \$1,000	34	37	30
Total	100	101 ^a	99 ^a
Number of interviews	109	63	46

^a Does not add to 100 percent because of rounding.

the account under study, but failed to report the balance. This type of error is serious, but not so serious as the first, since the investigator knows that some data are missing and can make adjustments. In a few interviews, 5 percent of the total, the respondents reported a total in several accounts but did not break it down for the individual accounts. This type of response is difficult to handle in a validity check, since it is not possible to make more than a guess as to whether the total is correct. In an ordinary study, however, such a reply may be satisfactory. Ordinarily an investigator is not concerned with breaking down a total balance among several accounts.

Third, 57 percent of the respondents reported the existence of the account and reported a balance for it. Of these, 16 percent underreported by \$1,000 or more, 7 percent overreported by \$1,000 or more, and 34 percent reported accurately within those limits. The results were, if anything, worse for the unstructured than for the structured or traditional questionnaire. It is interesting to note that this difference is in the same direction as that found for non-response, but smaller.

It hardly needs emphasis that these results show the existence of a serious problem of response error even in the structured interview. The most optimistic view would be to accept as accurate those interviews in which the respondents failed to report accounts jointly owned with someone outside the spending unit and also those in which they reported a total but failed to break it down. Even this approach would leave 19 percent of the respondents to the structured interview failing to mention the account and 10 percent refusing to report the balance, in addition to 27 percent whose reports were in error by \$1,000 or more.

Table 19 shows the actual discrepancies in more detail. For all interviews together the mean actual balance was \$3,810, as near as could be estimated from the approximate data made available to the investigators by the financial institutions. The mean reported balance was \$2,105. (In preparing the latter estimate, the same mean balance was assigned to those for whom the balance was not ascertained as the average for the rest of the sample for whom the balance was not ascertained. Missed accounts, however, were entered with a report of zero.) Thus, an estimate of the aggregate holdings of the sample of 109 based on the interviews would have been 55 percent of the correct total.

How successful in reducing this margin of error was the second manipulation, the use of a reinterview to correct the report of the balance in the fall? The results, which are summarized in Table 20, show a modest improvement. In this table the numbers shown are counts of interviews rather than percentages. As shown in the first column, of the 109 respondents in the fall, 80 were successfully reinterviewed, or 73 percent. Was there any relation between accuracy

Table 19. Actual Balances for Fall, 1958, Listed with Fall Reports (in dollars) in Relation to Response Error, with Means

Respondent failed to report account ^a	Respondent reported account, but the balance was not ascertained
Account owned by respondent or spouse or the two jointly	Reported account but refused to state balance
<u>Actual balance</u>	<u>Actual balance</u>
9,000+	10,000
7,450	9,000+
6,600	9,000
6,500	8,500
5,500	8,500
5,500	6,500
5,500	5,500
4,850	4,350
4,500	3,850
4,500	3,250
4,500	2,500
3,700	1,500
3,500	1,500
2,500	650
2,500	550
2,500	Mean = 5,010
2,500	
1,550	
1,500	
1,200	
Mean = 4,292	
Account owned entirely or in part by someone other than respondent and spouse	Reported a total in several accounts but would not break it down
<u>Actual balance</u>	<u>Actual balance</u>
9,500	
5,900	6,500
5,800	5,000
3,350	
3,150	3,900
1,850	
1,500	3,300
1,050	1,500
Mean = 4,012	Mean = 4,042

^a Reported balance is zero.

Table 19 (Continued)

Respondent reported balance			Respondent reported balance		
Actual balance	Reported balance	Discrepancy	Actual balance	Reported balance	Discrepancy
Underreported by \$1,000 or more			Accurate within \$1,000 (Continued)		
15,500	10,000	-5,500	3,650	3,000	-650
13,400	5,000	-8,400	3,550	3,400	-150
7,550	1,000	-6,550	3,450	3,100	-350
6,500	3,000	-3,500	3,400	3,000	-400
6,000	350	-5,700	3,200	3,450	300
4,650	1,150	-3,500	2,550	3,000	450
4,500	3,000	-1,500	2,550	3,000	450
3,750	2,200	-1,550	2,500	1,800	-700
3,500	1,000	-2,500	2,350	2,000	-350
3,500	1,000	-2,500	2,150	2,100	-50
2,800	150	-2,650	1,900	1,000	-900
2,550	300	-2,250	1,750	1,500	-250
2,300	300	-2,000	1,750	2,000	250
2,000	500	-1,500	1,750	1,500	-250
2,000	300	-1,650	1,750	1,250	-500
1,900	400	-1,500	1,650	2,200	550
1,750	400	-1,350	1,550	1,800	250
Mean =	Mean =	Mean =	1,450	1,000	-450
4,951	1,768	3,183	1,350	1,400	50
Overreported by \$1,000 or more			1,350	1,500	150
10,500	15,000	4,500	1,350	1,200	-150
7,600	10,000	2,400	1,350	1,000	-350
5,500	10,000	4,500	1,300	1,500	200
2,900	12,000	9,100	1,250	1,700	450
1,600	6,100	4,500	1,250	1,300	50
1,600	3,500	1,900	1,200	1,000	-200
1,500	2,600	1,100	1,150	1,100	-50
1,500	3,000	1,500	1,150	500	-650
Mean =	Mean =	Mean =	1,050	1,000	-50
4,086	7,775	3,689	1,050	200	-850
Accurate within \$1,000			950	700	-250
10,450	10,000	-450	600	1,000	400
5,400	5,000	-400	Mean =	Mean =	Mean =
5,050	5,300	250			
4,950	5,000	50	2,363	2,236	80 ^b

^bTaking signs into account, i.e., letting the errors cancel each other.

Note: For all interviews, assigning the same mean reported balance for those for which the balance was not ascertained as for those for which the balance was reported, mean actual balance = \$3,810 and mean reported balance = \$2,105.

Table 20. Response Error in Best Estimate from Interviews of Fall, 1958, Balance in Relation to Response Error in Fall Report (Distribution of numbers of interviews)

Response error in best estimate from interviews of Fall, 1958, balance	Response error in fall report of Fall, 1958, balance							Accurate within \$1,000
	All inter-views	Failed to report account		Reported account, balance not ascertained		Reported balance for account		
		Account is owned by respondent or spouse or the two jointly	Account is owned entirely or in part by someone other than respondent and spouse	Reported account but refused to state balance	Reported only a total for several accounts	Under-reported by \$1,000 or more	Over-reported by \$1,000 or more	
There was no reinterview	29	8	2	3	1	3	3	9
There was a reinterview	80	12	5	12	4	14	5	28
Failed to report account	11	6	5	-- b	-- b	-- b	-- b	-- b
Account owned by respondent or spouse or the two jointly	6	6	a	-- b	-- b	-- b	-- b	-- b
Account owned entirely or in part by someone other than respondent and spouse	5	-- a	5	-- b	-- b	-- b	-- b	-- b
Reported account, balance not ascertained	14	1	-- a	10	3	-- b	-- b	-- b
Reported account but refused to state balance	11	1	-- a	10	b	-- b	-- b	-- b
Reported a total in several accounts but would not break it down	3	-- a	-- a	-- a	3	-- b	-- b	-- b
Reported balance for account	55	5	-- a	2	1	14	5	28
Underreported by \$1,000 or more	19	3	-- a	1	1	13	-- a	1
Overreported by \$1,000 or more	4	-- a	-- a	1	-- a	-- a	2	1
Accurate within \$1,000	32	2	-- a	-- a	-- a	1	3	26
Number of Interviews	109	20	7	15	5	17	8	37

^a Less than 0.5 percent.

^b Impossible cell because the study design did not allow such changes.

of response in the fall and willingness to be interviewed again in the spring? The data point in that direction, but the results are not conclusive. It is at least suggestive that of the 20 respondents who made the "worst" errors by failing to report accounts owned by themselves or their spouses, 8, or 40 percent, dropped out of the spring sample. Of the 37 who gave the "best" answers, only 9, or 24 percent, dropped out.

Of the 12 who had failed to report an account and were reinterviewed, 6 now reported at least the existence of the account, a clear improvement. Of 5 who failed to report an account owned jointly with an outsider and were reinterviewed, all continued to omit mention of the account--as might have been expected if the account was exclusively for the benefit of the outsider. Of 12 who reported the account but not the balance and were reinterviewed, 2 now reported a balance. Of 4 who reported only a total, 1 now gave a breakdown. Of 14 who underreported, 1 now reported accurately. Of 5 who overreported, 3 now reported accurately. Of 28 who reported accurately, 2 now slipped into over or underreport, but 26 remained accurate. Altogether, on this calculation, there was an improvement in 13 reports and a loss in only 2.

How is it possible for the second interview to make matters worse? This result can follow if, for example, a respondent reports accurately in the fall and inaccurately in the spring, and then insists on the correctness of the spring report. Without independent knowledge of the facts an investigator would have to rely on what was said in the second interview and would have been misled. As has just been noted, this type of unfortunate sequence of events occurred only twice.

One type of error in particular was much reduced. Only 4 interviews showed overreports after the reinterview. This result suggests that overreport is essentially an accident, or, at least, that people are not as strongly motivated to overreport as to underreport.

Compared with the magnitude of the original errors, the gains were small. The results are summarized in Table 21, which shows the error in the best estimate of the fall balance on the basis of the two interviews combined. The data are also shown on Chart 2. The parallel lines on that chart show the margin of error of \$1,000 used in the tables.

Total Holdings in Savings Accounts

It was not unusual for a respondent to report to the interviewer one or more savings accounts other than the account under special study. The reported total holdings as of March 1, 1959, for the reinterviews were as follows:

<u>Total reported in all savings accounts</u>	<u>Number of interviews</u>
None	3
Under \$1,000	10
\$1,000 - \$4,999	29
\$5,000 or over	18
Not ascertained	<u>21</u>
Total	81

These results suggest that many respondents compromised by revealing partial information about their savings accounts. Only 3 out of 81 (4 percent) stated flatly that they had no savings accounts at all.

Chart 2. Best Estimated Reported and Actual Balances, Fall, 1958

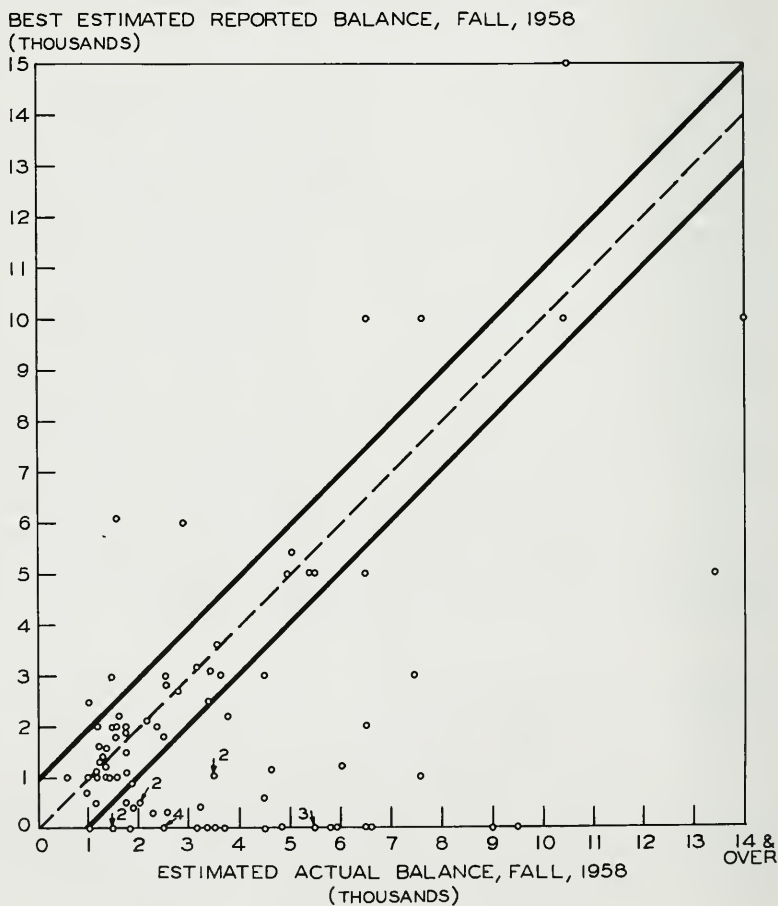


Table 21. Response Error in Best Estimate from Interviews of Fall, 1958, Balance in Relation to Source of Best Estimate (Numerical and percentage distribution of interviews)

Response error in best estimate from interviews of Fall, 1958, balance	All interviews		Source of best estimate			
	Percent	Number	Fall interview plus reinterview		Fall interview only (not reinterviewed)	
			Percent	Number	Percent	Number
Failed to report account	19	21	14	11	34	10
Account owned by respondent or spouse or the two jointly	13	14	8	6	28	8
Account owned entirely or in part by someone other than respondent and spouse	6	7	6	5	7	2
Reported account, balance not ascertained	17	18	18	14	14	4
Reported account but refused to state balance	13	14	14	11	10	3
Reported a total in several accounts but would not break it down	4	4	4	3	3	1
Reported balance for account	64	70	69	55	52	15
Underreported by \$1,000 or more	20	22	24	19	10	3
Overreported by \$1,000 or more	6	7	5	4	10	3
Accurate within \$1,000	38	41	40	32	31	9
Total	100	109	101 ^a	80	100	29

^a Does not add to 100 percent because of rounding.

Excluding the "not ascertained" group, 78 percent of the respondents reported total savings account balances of \$1,000 or more as of March 1, 1959.

Change in Balance

Table 22 shows the relation between actual change in balance and reported change in balance from the fall of 1958 to the spring of 1959. This reported change is the difference between the best estimate for the fall, based on full use of both interviews, and the balance reported in the spring. A comparison could be made for 49 interviews. Of the 49, 26 actually increased by \$100 or more. (Smaller changes typically represented only the accrual of interest.) Of the 26, 5 reported a decrease, 5 no change, and 16 an increase. Of the 9 actual decreases, 3 were reported as such, 4 as no change, and 2 as increases.

The low level of accuracy indicated is in part a result of the peculiar structure of the spring interview. The respondents were asked to report in the spring both fall and spring balances. They were then asked to reconcile the two reports of their fall balances. As a rule any changes made in the reconciliation were not carried over to correct the spring balance. Hence, the change, as measured, often was from a corrected fall balance to an uncorrected spring balance. The difference between the two may include both the correction and the reported change.

Size of Actual Balance

The next step became a search for new light on the causes of response error through study of the factors associated with it. Table 23 shows the relation between the size of the actual balance in the fall of 1958 and the response error in the fall report of the fall balance. The hypothesis originally suggested was that the larger the actual balance the greater the response error would be. The data tend to support the hypothesis.

An error of \$1,000 may seem less to a respondent on a balance of \$5,000 than an error of that amount in reporting a balance of \$1,000. But it hardly seems likely that this phenomenon accounts entirely for the observed decline in the proportion who reported their balances within \$1,000 as the actual balances increased. Of those with a balance under \$2,000, 56 percent reported accurately by this measure, compared with 35 percent of those with a balance between \$2,000 and \$3,499, 18 percent of those with a balance between \$3,500 and \$5,000, and only 10 percent with a balance of \$5,000 or more.

It is important to note that the proportion who failed to report the account entirely tended to rise with size of balance. If people failed to

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Table 22. Reported Number of Changes in Balances from Fall, 1958, to Spring, 1959,
In Relation to Actual Changes in Balances

Reported change ^a	Actual number of changes in savings accounts from Fall, 1958, to Spring, 1959 ^b												Total				
	Increases						Decreases										
	\$3,000- \$5,999	\$2,000- \$2,999	\$1,000- \$1,999	\$500- \$999	\$100- \$499	\$1- \$ 99	\$1- \$ 99	\$100- \$499	\$500- \$999	\$1,000- \$1,999	\$2,000- \$2,999	\$3,000- \$5,999					
Increases																	
\$3,000 - \$4,999		1															1
\$2,000 - \$2,999			1														
\$1,000 - \$1,999	1		1														
\$ 500 - \$ 999				3													
\$ 100 - \$ 499					2												
\$ 1 - \$ 99						3								1			
Decreases																	
\$ 1 - \$ 99																	
\$ 100 - \$ 499																	
\$ 500 - \$ 999																	
\$1,000 - \$1,999																	
\$2,000 - \$2,999																	
\$3,000 - \$5,999																	
No change																	
Total	2	1	2	9	12	14	1	1	1	1	1	2	3	1	1	2	49

^a The difference between the best estimate from both interviews for the Fall, 1958, balance and the report of the Spring, 1959, balance.

^b Excludes 29 interviews for which no spring interview was obtained, 2 interviews whose accounts were closed as of the specified date in Spring, 1959, and 29 interviews for which one or both balances were not reported or not ascertained.

Table 23. Response Error in Fall Report of fall, 1958, Balance in Relation to Size of Actual Balance in the Account, with Means (Numerical and percentage distribution of interviews)

	All interviews		Actual balance, fall, 1958										Mean actual balance fall, 1958 ^a
	Per- cent	Num- ber	\$ 0 - \$1,999		\$2,000 - \$3,499		\$3,500 - \$4,999		\$5,000 or more				
			Per- cent	Num- ber	Per- cent	Num- ber	Per- cent	Num- ber	Per- cent	Num- ber			
Failed to report account	25	28	16	6	26	6	35	33	10				\$4,212
Account owned by respondent or spouse or the two jointly	18	20	8	3	17	4	35	23	7				4,292
Account owned entirely or in part by someone other than respondent and spouse	7	8	8	3	9	2	-- ^b	10	3				4,012
Reported account, balance not ascertained	19	20	13	5	13	3	18	30	9				4,768
Reported account but refused to state balance	14	15	10	4	9	2	12	23	7				5,010
Reported a total in several accounts but would not break it down	5	5	3	1	4	1	6	7	2				4,042
Reported balance for account	56	61	71	28	71	14	47	37	11				3,310
Underreported by \$1,000 or more	16	17	5	2	22	5	29	17	5				4,951
Overreported by \$1,000 or more	7	8	10	4	4	1	-- ^b	10	3				4,086
Accurate within \$1,000	33	36	56	22	35	8	18	10	3				2,363
Total	100	109	100	39 ^c	100	23	100	100	30				3,810

^aA balance of "\$9,000 or more" is included at \$9,000.

^bLess than 0.5 percent.

^cOf these 39 accounts, only 4 were actually under \$1,000. Of these 4, 2 were accurate and 2 reported the balance but refused the amount.

report an account because it did not come to mind during the interview, one would expect more errors of this type for moderate sized accounts than for large accounts. The data suggest, therefore, that failure to report an account at all is not primarily due to memory error. The proportion of accounts for which the balance was not ascertained also tended to increase somewhat with increasing actual balance. As shown in the last column of the table, the mean actual balance for those for whom the balance was not ascertained was \$4,768. For those who did report the balances in their accounts, the mean actual balance was \$3,310. Altogether, then, the data in this table clearly point in the direction of increasing response error with increasing actual size of balance.

Type of Use of the Account

Respondents who reported the existence of an account were asked questions concerning its use. Table 24 shows the relation between the type of use of the account under study as reported by the respondents and response error in the best estimate of the Fall, 1958, balance. The hypothesis was that people who use their accounts frequently for short-term transactions or for medium-term transactions would have occasion to make deposits and withdrawals often and would tend to know what the balances were in their accounts. It was also expected that people who use their accounts for these rather public reasons would be more willing to discuss the accounts than people who think of their accounts as their major and perhaps secret financial resource. The data do not indicate any very large differences in the accuracy of reports of people who use their accounts for these different purposes. The only conspicuous difference between the two groups is that those who use their accounts for short- or medium-term transactions did not include any of those who had overreported by \$1,000 or more. This result is consistent with the hypothesis mentioned earlier that overreport is essentially an accident. People who use their accounts for short- or medium-term transactions tend not to make this particular mistake.

Response Error in Reports of Size of Change in the Balance

Another way of testing the same basic hypothesis that people with active accounts will report their balances more precisely is by relating the best estimate of the fall balance to the absolute amount of change in the balance from the fall to the spring. The hypothesis was that people with small changes, such as might result simply from the accrual of interest, would be more likely to make mistakes in their reports. The data shown in Table 25 point in that direction but the differences are not large enough to be statistically reliable.

Table 24. Response Error in Best Estimate from Interviews of Fall, 1958,
Balance in Relation to Type of Use of this Account
(Percentage distribution of interviews)

Response error in best estimate from interviews of Fall, 1958, balance	Type of use of account ^a		
	All interviews	Short- or medium-term transactions	Other uses
Reported account, balance not ascertained	20	17	22
Reported account but refused to state balance	16	17	15
Reported a total in several accounts but would not break it down	4	b --	7
Reported balance for account	80	82	78
Underreported by \$1,000 or more	28	26	28
Overreported by \$1,000 or more	6	b --	9
Accurate within \$1,000	46	56	41
Total	100	99 ^c	100
Number of interviews	69	23	46

^a Excludes 11 interviews in which this account was not reported and 29 interviews for which a reinterview asking for use of this account was not obtained.

^b Less than 0.5 percent.

^c Does not add to 100 percent because of rounding.

Table 25. Response Error in Best Estimate from Interviews of Fall, 1958, Balance in Relation to Size of Change of Balance, Fall, 1958, to Spring, 1959 (Percentage distribution of interviews)

Response error in best estimate from interviews of Fall, 1958, balance	All interviews	Absolute amount of change in balance ^a			Large change \$500 or more
		Small change \$ 0 - \$99	Medium change \$100 - \$499		
Failed to report account	19	21	24		3
Account owned by respondent or spouse or the two jointly	13	17	10		-- ^b
Account owned entirely or in part by someone other than respondent and spouse	6	4	14		3
Reported account, balance not ascertained	17	17	10		21
Reported account but refused to state balance	13	8	5		21
Reported a total in several accounts but would not break it down	4	8	5		-- ^b
Reported balance for account	64	62	67		76
Underreported by \$1,000 or more	20	25	19		24
Overreported by \$1,000 or more	6	4	-- ^b		9
Accurate within \$1,000	38	33	48		42
Total	100	100 ^c	101 ^c		100 ^c
Number of interviews	109	24	21		33

^a Excludes 29 interviews for which there was no spring reinterview and 2 interviews whose accounts were closed as of specified date in Spring, 1959. Of the 78 remaining interviews, only 13 showed a decrease in the balance. Of these, 1 was a small decrease, 3 were medium decreases, and 9 were large decreases.

^b Less than 0.5 percent.

^c Detail does not add to total percent because of rounding.

Income

The next series of tables is designed to test the relation between response error and a group of major demographic or economic characteristics of the unit. In Table 26 the response error is shown for groups of spending units in different income classes. The data show a small but statistically not reliable tendency for units with income over \$10,000 to be more likely than those with incomes below that level to report a balance for the account. This result is the opposite of what might have been predicted from the study of the table showing the relation between actual balance and response error. Since there is a tendency for response error to increase with size of balance, one might have expected a tendency for response error to increase with income. The data do not bear out this relationship. These results suggest that the worst reports may be for large balances owned by people of lower socioeconomic status.

Education

The relation between the education of the respondent and response error in the report of the fall balance is shown in Table 27. The data in Table 27 suggest a tendency for reports to be more accurate as education increases. The differences, however, are not large enough to be impressive from a statistical point of view. If anything, people with more education are more likely to report the existence of an account than those with less education.

Occupation

In Table 28 the relation between the occupation of the head of the family and response error is shown. The number of interviews permitted only a distinction between white-collar and blue-collar workers. The reports of white-collar workers seem to have been more accurate. This result, of course, is consistent with the previous findings for education and income.

Age of the Respondent

Table 29 compares the accuracy of response for respondents under 45 with those 45-64 and 65 years of age and over. The table shows little difference among these three groups. What differences do appear may be easily attributable to sampling error. If anything,

Table 26. Response Error in Best Estimate Report of Fall, 1958,
Balance in Relation to Income of Spending Unit
(Percentage distribution of interviews)

Response error in best estimate report of Fall, 1958, balance	All interviews	Income of spending unit ^a		
		Under \$5,000	\$5,000- \$9,999	\$10,000 and over
Failed to report account	19	22	20	10
Reported account, balance not ascertained	17	15	11	10
Reported account but refused to state balance	13	10	11	5
Reported a total in several accounts but would not break it down	4	5	-- ^b	5
Reported balance for account	64	63	68	81
Underreported by \$1,000 or more	20	22	14	29
Overreported by \$1,000 or more	6	7	-- ^b	19
Accurate within \$1,000	38	34	54	33
Total	100	100	99 ^c	101 ^c
Number of interviews	109	41	35	21

^a Excludes 12 interviews in which the income was not ascertained.

^b Less than 0.5 percent.

^c Does not add to 100 percent because of rounding.

Table 27. Response Error in Best Estimate Report of Fall, 1958,
Balance in Relation to Education of Respondent
(Percentage distribution of interviews)

Response error in best estimate report of Fall, 1958, balance	All interviews	Education of respondent ^a		
		Eight grade or less	High school	College
Failed to report account	19	29	16	12
Reported account, balance not ascertained	17	16	20	12
Reported account but refused to state balance	13	8	18	12
Reported a total in several accounts but would not break it down	4	8	2	-- ^b
Reported balance for account	64	55	63	76
Underreported by \$1,000 or more	20	16	20	24
Overreported by \$1,000 or more	6	5	2	12
Accurate within \$1,000	38	34	41	40
Total	100	100	99 ^c	100
Number of interviews	109	38	44	25

^a Excludes 2 interviews in which the education of the respondent was not ascertained.

^b Less than 0.5 percent.

^c Does not add to 100 percent because of rounding.

Table 28. Response Error in Best Estimate from Both Interviews of fall, 1958,
Balance in Relation to Occupation of Head of Family
(Percentage distribution of interviews)

Response error in best estimate from both interviews of fall, 1958, balance	All interviews	Occupation of head of family ^a	
		White-collar workers	Blue-collar workers
Failed to report account	14	9	18
Reported account, balance not ascertained	18	11	27
Reported account but refused to state balance	14	9	21
Reported a total in several accounts but would not break it down	4	2	6
Reported a balance for this account	69	80	54
Underreported by \$1,000 or more	24	25	21
Overreported by \$1,000 or more	5	5	6
Accurate within \$1,000	40	50	27
Total	101 ^b	100	99 ^b
Number of interviews	80 ^c	44	33

^a Three interviews with families whose head is not in the labor force are excluded from the distribution by occupation.

^b Does not add to 100 percent because of rounding.

^c Excludes 29 interviews for which no reinterview was obtained.

Table 29. Response Error in Best Estimate Report of Fall, 1958,
Balance in Relation to Age of Respondent
(Percentage distribution of interviews)

Response error in best estimate from interviews of Fall, 1958, balance	All interviews	Age of respondent ^a		
		Under 45	45-64	65 and over
Failed to report account	19	21	19	21
Account owned by respondent or spouse or the two jointly	13	17	14	8
Account owned entirely or in part by someone other than respondent and spouse	6	4	5	13
Reported account, balance not ascertained	17	21	12	25
Reported account but refused to state balance	13	21	10	13
Reported a total in several accounts but would not break it down	4	-- ^b	2	12
Reported balance for account	64	58	69	54
Underreported by \$1,000 or more	20	17	22	21
Overreported by \$1,000 or more	6	4	8	4
Accurate within \$1,000	38	37	39	29
Total	100	100	100	100
Number of interviews	109	24	59	24

^a Excludes 2 interviews in which age of respondent was not ascertained.

^b Less than 0.5 percent.

reports by those aged 65 or over are less accurate than reports of younger respondents.

Sex of the Respondent

In Table 30 the comparison is made between accuracy of response for male and for female respondents. Any differences between the sexes which appear in the table are small enough to assign to sampling error in view of the limited number of interviews. However, it remains a possibility that male respondents give more accurate answers than do female respondents. A more careful study of this problem was made in a later study and will be reported in Chapter VII.

Keeping Records of Money Spent

Table 31 was constructed on the hypothesis that respondents who keep records will have more information about their financial affairs and will report more accurately. As predicted, those who reported that they kept records were more likely than those who said they kept no records to be accurate within \$1,000. The difference is large enough to be statistically reliable even with the size of sample shown. The difference between the two groups in the proportion who reported the existence of the account, however, is smaller. Thus, the data are consistent with the interpretation that people who keep records are more likely to report accurately if they do report the existence of an account. There is also some indication that people who keep records are less likely to miss accounts owned by other members of their families than those who keep no records.

These data must be interpreted in light of the fact that everyone who owns a savings account necessarily keeps a pass book which constitutes a record of his balance. It is possible that the people who report that they keep records are more conscientious respondents than those who do not report keeping records. For example, people who keep only the stubs in their check books may report that they keep records if they are cooperating whole-heartedly with the interviewer. Such people may report that they keep no records if they are not very interested in the interview. They simply may not go to the trouble of thinking to themselves that a check book stub is in fact a record, and that this is one of the things the interviewer may well be asking about.

Table 30. Response Error in Best Estimate Report of Fall, 1958,
Balance in Relation to Sex of Respondent
(Percentage distribution of interviews)

Response error in best estimate report of Fall, 1958, balance	All interviews	Sex of respondent ^a	
		Male	Female
Failed to report account	19	15	26
Reported account, balance not ascertained	17	16	17
Reported account but refused to state balance	13	13	13
Reported a total in several accounts but would not break it down	4	3	4
Reported balance for account	64	69	57
Underreported by \$1,000 or more	20	21	20
Overreported by \$1,000 or more	6	6	7
Accurate within \$1,000	38	42	30
Total	100	100	100
Number of interviews	109	62	46

^a Excludes 1 interview for which sex of respondent was not recorded.

Table 31. Response Error in Best Estimate from Both Interviews of Fall, 1958,
Balance in Relation to Whether Respondent Keeps Records of Money Spent
(Percentage distribution of interviews)

Response error in best estimate of the Fall, 1958, balance	All interviews	Records of money spent	
		Keeps some records ^a	Keeps no records
Failed to report account	14	7	21
Account owned by respondent or spouse or the two jointly	8	7	8
Account owned entirely or in part by someone other than respondent and spouse	6	-- b	13
Reported account, balance not ascertained	18	19	15
Reported account but refused to state balance	14	17	10
Reported a total in several accounts but would not break it down	4	2	5
Reported balance for account	69	74	64
Underreported by \$1,000 or more	24	15	33
Overreported by \$1,000 or more	5	-- b	10
Accurate within \$1,000	40	59	21
Total	101 ^c	100	100
Number of interviews	80	41	39

^a Includes 13 respondents who said they kept "check stubs only"; of the 13, 9 reported accurately.

^b Less than 0.5 percent.

^c Does not add to 100 percent because of rounding.

Memory Error

The two tables which follow were constructed to make possible the comparison of accuracy of response at different dates. Table 32 is based on reports of the balance at three points in time about which information was asked in the fall of 1958. The dates involved were the first of the month in which the interview was taken, six months earlier, and twelve months earlier. The comparison of the three dates cannot be made for all respondents since a number of respondents opened their accounts within the period of one year.

The data show very little difference in accuracy from one date to the next. No doubt as one goes back farther in time, there would be more departures from perfect accuracy within the group who were approximately accurate. The proportion who were correct within \$1,000, however, does not change among the three dates. Memory error does not seem to account for any large part of the errors reported in Table 32.

A similar comparison is shown in Table 33 based on data from the reinterviews in the spring of 1959. The first column shows the error in the report of the spring balance, that is, the current balance at the time of interview. The second column shows the report in the spring of the balance in the fall. The second column is based on the statements made by the respondent before he was shown his earlier report of the fall balance.

Once again, there is very little evidence of any difference in accuracy between the two reports. It is not surprising that people who failed to report the existence of an account as of a date when they were being interviewed should also fail to report that this account existed half a year earlier. Also, it is not surprising that people who refused to state the balance in an account as of the time of interview should also refuse to state the balance in that account as of some earlier date. No doubt memory is a factor, but its effects are not powerful in explaining the allocation of respondents among the categories shown in Table 33.

Classification of Respondents as Accurate Reporters

The study design afforded the possibility of independent tests of the accuracy of given individuals as reporters. A respondent might report accurately or inaccurately in the first interview. He might also report his current balance accurately or inaccurately in the second interview. To what extent did people who reported accurately in one interview report accurately in the second? Table 34 was constructed to shed light on this question. For the most part respondents who reported accurately in the fall persisted in the same tendency in the spring. However, there are a number of examples of people

Table 32. Response Error in Reports of Balance at Three Points
in Time Based on Interviews Taken in fall, 1958
(Percentage distribution of interviews)

	Date of balance		
	Current balance (Fall, 1958)	Balance six months ago	Balance one year ago (Fall, 1957)
Response error in reports of balance			
Failed to report account	24	27	26
Account owned by respondent or spouse or the two jointly	18	19	19
Account owned entirely or in part by someone other than respondent and spouse	6	8	7
Reported account, balance not ascertained	19	20	22
Reported account but refused to state balance	14	14	15
Reported a total in several accounts but would not break it down	5	6	7
Reported balance for account	57	54	52
Underreported by \$1,000 or more	16	11	9
Overreported by \$1,000 or more	7	9	6
Accurate within \$1,000	34	34	37
Total	100	101 ^a	100
Number of interviews	109	102 ^b	86 ^c

^a Does not add to 100 percent because of rounding.

^b Excludes 6 respondents whose accounts were not open on the specified date in Spring, 1958, and 1 respondent who was not asked the question.

^c Excludes 22 respondents whose accounts were not open on the specified date in Fall, 1957, and 1 respondent who was not asked the question.

Table 33. Response Error in Reports of Balance at Two Points
in Time Based on Reinterviews Taken in Spring, 1959
(Percentage distribution of interviews)

Response error in reports of balance	Date of balance	
	Current balance (Spring, 1959) ^a	Balance six to eight months ago (Fall, 1958) ^b
Failed to report account	16	16
Account owned by respondent or spouse or the two jointly	8	8
Account owned entirely or in part by someone other than respondent and spouse	8	8
Reported account, balance not ascertained	20	24
Reported account but refused to state balance	15	20
Reported a total in several accounts but would not break it down	5	4
Reported balance for account	63	61
Underreported by \$1,000 or more	19	20
Overreported by \$1,000 or more	6	5
Accurate within \$1,000	38	36
Total	99 ^c	101 ^c
Number of interviews	78 ^d	80

^a Respondents were interviewed in April through June and were asked about balance on March 1.

^b Report prior to confronting.

^c Does not add to 100 percent because of rounding.

^d Excludes 2 respondents whose accounts were closed out prior to the specified date in Spring, 1959.

Table 34. Response Error in Spring Report of Spring, 1959, Balance
in Relation to Fall Report of Fall, 1958, Balance
(Distribution of interviews)

	All inter-views	Response error in fall report of Fall, 1958, balance						
		Failed to report account		Reported, account, balance not ascertained		Reported balance for account		Accurate within \$1,000
		Account owned by respondent or spouse or the two jointly	Account owned entirely or in part by someone other than respondent and spouse	Reported account but refused to state balance	Reported only a total for several accounts	Under-reported by \$1,000 or more	Over-reported by \$1,000 or more	
Response error in spring report of Spring, 1959, balance								
Failed to report account	12	6	5	--a	--a	1	--a	--a
Account owned by respondent or spouse or the two jointly	6	6	--a	--a	--a	--a	--a	--a
Account owned entirely or in part by someone other than respondent and spouse	6	--a	5	--a	--a	1	--a	--a
Reported account, balance not ascertained	16	--a	--a	10	3	--a	--a	3
Reported account but refused to state balance	12	--a	--a	10	--a	--a	--a	2
Reported a total in several accounts but would not break it down	4	--a	--a	--a	3	--a	--a	1
Reported balance for account	50	4	--a	2	1	13	5	25
Underreported by \$1,000 or more	15	2	--a	1	--a	9	2	1
Overreported by \$1,000 or more	5	--a	--a	1	--a	--a	1	3
Accurate within \$1,000	30	2	--a	--a	1	4	2	21
Number of interviews	78 ^b	10	5	12	4	14	5	28

^a No interview fell in this category.

^b Excludes 29 respondents who were not reinterviewed in the spring and 2 respondents whose accounts were not open on the specified date in Spring, 1959.

who differed in accuracy of report between the two dates. For example, of the 28 respondents who were accurate within \$1,000 in the fall, 7 of the 28, or 25 percent, were backsliders. In other words an individual who reports accurately on one occasion probably will do so again, but one cannot have complete confidence that this will be true. This result, combined with the evidence that many respondents compromised and reported partial information about savings accounts, suggests that it would not be easy to divide respondents into two groups: accurate reporters and inaccurate reporters.

Conclusions

This chapter includes evidence that accuracy of response was associated with each of the following:

- Use of a structured questionnaire
- Use of reinterview
- Smaller actual balance
- White-collar occupational status
- Reporting that the family keep records
- Accuracy of response in a previous interview

There is some doubt as to whether accuracy of response is associated with each of the following:

- Type of use of the account
- Change in balance or level of activity of the account
- Income
- Education

There seems to be little evidence of association between accuracy of response and the following:

- Age
- Sex of respondent
- Date for which the balance is asked (current, six months ago, or a year ago)

These results will be compared in a later chapter with those from other surveys.

VI. REPORTS OF CASH LOANS: THE SECOND FIELD EXPERIMENT

In the winter and spring of 1959 the investigators reviewed the results of the fall interviews and made arrangements for two new field experiments. The first of these involved interviews in two large cities with a group of respondents known to have borrowed cash from small loan companies. The results are reported in this chapter. The following chapter reports the results of an additional study of owners of savings accounts which was also planned and carried out during 1959.

Purposes of the Study and Description of Procedures

Purposes

Although further study of owners of savings accounts seemed desirable after completion of the interviews in the first field study, it was decided also to investigate response error in the field of consumer credit. Several factors contributed to this decision. The importance to the economy of the nation of the large and fluctuating volume of consumer debt outstanding is well known. There are indications that the Surveys of Consumer Finances seriously understate total consumer credit outstanding. Within the field of consumer debt the indications are that debt to cash lenders is the most difficult to ask about in personal interviews. The investigators felt that more might be learned by tackling the difficult topics than the easy ones.

The Need for Anonymity

In this study as in the others in the series both the investigators and the cooperating financial institutions felt the need to guarantee the confidentiality of data received from individuals in the sample. As before, interviewers were not informed as to the sources of the names and addresses in the sample. In addition, a number of "dud" addresses were included in the sample, names selected from the appropriate telephone directories. These interviews have been excluded from the analysis. They did serve the purpose, however, of making certain that even an interviewer who guessed the origin of the sample could never be sure of the fact that any respondent's name had been selected from a list of borrowers.

Sample Selection

The sample was drawn by selecting every nth name from lists of known borrowers in two large cities.

Validation Procedure

The procedure adopted, as in the previous study, was for the Center to compare data gained in the survey with data from previous files on known borrowers after the completion of the interviewing (with due safeguards regarding the anonymity of respondents).

Experimental Manipulation

In planning this project the investigators proceeded by attempting to develop a theory of response error based on the knowledge available to them at this stage. The results of this effort will be incorporated in Chapter IX. Here it is necessary only to recapitulate briefly the reasoning which led to the particular procedures tried in the field.

The investigators had come to believe the most important source of response error in reports of financial data to be the lack of motivation on the part of the respondent to reveal the data. The key question thus became, what motives are the crucial ones? Several suggestions were made. The experimental manipulations were based on the following argument, reproduced here from the statement of plans:

“The experience of the survey worker is that accurate information can be obtained from people when what is required is ‘public’ information of the kind which people feel others ordinarily know about them. The difficulties arise only when it is necessary to ask for ‘private’ information. Very frequently people will reveal ‘private’ information to interviewers, but what is needed is that everyone or nearly everyone should reveal this information.

“Why should people tell an interviewer things they would not reveal in ordinary social intercourse? In order to obtain ‘private’ information from respondents, the interviewer must get around the usual standards and norms. The interviewer can do this only if he can so structure the whole situation that the respondent sees it as ‘different.’

“Two things are different about the interviewer: (1) It is anonymous. Every safeguard must surround the anonymity of the respondents. To ask for him by name, as in the first field experiment, is a fatal error. He must be given every conceivable assurance that nothing he says will be or can be associated with him in any way. (2) The interview is also unique in the relationship developed between interviewer and respondent. People must learn about this relationship from experience: they must be trained to be respondents. Hence, questionnaires should be designed with introductory sequences whose major purpose is to

assist the interviewer to convince the respondent that the interview is a special situation -- where the norms of reticence do not apply."

What the manipulations were can best be conveyed by quoting the actual instructions to the interviewers:

"The addresses in the sample have been divided on a random basis into three groups. We hope to compare the accuracy of response from group to group. The groups are as follows:

"A. Respondents who fall in the A part of the sample will be approached in the same way as we usually approach respondents on financial surveys. There will be one unusual feature: we will know in advance the name of the person to be interviewed and before leaving the respondent you should check that you have the right respondent by name. You may wait until the end of the interview and ask his name in the context of offering a report and the mention of a mail follow-up by the Ann Arbor office.

"B. The procedure here will be identical with that for names in the A part of the sample except that no use should be made of the name of the respondent in the interview. We will rely on the address and his report of how long he has lived there to make sure we have the right respondent. (We will send his copy of the report and any mail follow-up to 'Head of Household.')

"You should ask for the male head or female head of the family according to whether the name given you is that of a man or woman. And, if you can, check to see that the name matches the name on a mailbox. But the essential thing is to avoid any use of the name in the interview. Be careful not to let the respondent see the cover sheet with his name on it.

"C. The C part of the sample will be similar to the B part in that no use will be made of the name of the respondent, nor will he be asked for his name. The C interview will also differ in that the following techniques will be used here (but not in A or B):

- (1) The sealed envelope technique: The financial data in the last section of the interview are to be detached from the rest of the interview in the respondent's presence, placed in a stamped envelope addressed to the Survey Research Center, and the envelope sealed. You as interviewer may offer the respondent the option of filling out himself this section of the interview so that you never see the answers. In any event you should tell the respondent that you will mail the envelope in the nearest letterbox and you should do so. You should invite him to come with you to the letterbox. Do not leave the envelope for him to mail -- people are too forgetful.

- (2) Special explanation of how interviews are processed: We are asking you to make to the respondent a special explanation of how the factual material in interviews is tabulated. This explanation will involve three 'props': an I.B.M. card, instructions on the last pages of the interview for keypunching the material in the interview onto I.B.M. cards, and a sample report. The idea is to make clear to the respondent the impersonal way in which we actually process such data. How much detail you go into will depend on your assessment of the situation in the interview.
- (3) Special explanation of purposes of the study and its usefulness to the respondent: We want to make a special effort to explain the usefulness of the research to the respondent and, if possible, to lead him to see it as contributing directly to something he himself wants. The most hopeful possibility seems to us that he may be interested in how other people handle their financial affairs. (In our pretests, it appeared that most respondents were quite curious about how others handled their finances and how he compared with them. This might be worth playing on.) Do they have a formal budget? How does it work? Do they keep records? How do they handle the problem of living within their income? People who have no problems themselves may be amenable to the idea of passing on to others how they do it. (See the question about advice to a young couple in Schedule E.) We will undertake to prepare a report about these topics which we will send to respondents on this study. (This report may be mentioned to A and B respondents at the close of the interview. It should be 'sold' to C respondents.)"

The Questionnaire

The questionnaire itself appears in Appendix B. It is basically a fixed-question, free-answer schedule of the general type commonly used by the Survey Research Center in economic studies other than the Survey of Consumer Finances. Some use was made of fixed-answer questions.

The topics of the questionnaire in the order asked were as follows:

Current economic attitudes

Housing

Children, their education, and how their college education may be financed

Financial management

Attitudes toward borrowing

Sentence completion items on the use of money

Fixed alternative questions designed to measure two dimensions of personality

Personal data

Financial information, covering liquid assets, mortgage payments, cash loans, and instalment purchases

The financial information was on a separate form suitable for separate mailing in a "sealed envelope." It should be noted that the sequence of questions was designed to follow out the reasoning that people must be trained to be respondents. The sequence on general economic attitudes was one that has been used in many studies by way of introduction. People's houses and their children seemed likely to be interesting topics to respondents and easy for them to talk about. The emphasis on financing education and the extensive discussion of patterns of financial management (budgeting, planning, and so forth) helped to turn the interview toward financial data while avoiding as yet asking for precise and detailed data on financial affairs. The psychological material for the most part served the same purpose, though some items must have seemed like a digression to many respondents. In this way a careful attempt was made to lead up to the significant financial questions.

After the interview was over a mail questionnaire was sent to respondents asking for their reactions to the interview. The results of this reinterview will appear in Chapter VIII.

Error of Non-Response

A total of 138 selected addresses fell into the sample. This count excludes those addresses omitted because the selected name and address did not check out against the most recent telephone book or city directory and those addresses at which the interviewer found that the respondent had moved away. Also excluded are the "dud" addresses of persons not known to have a cash loan which were described in the previous section.

The interviewers were successful in obtaining an interview at 73 percent of the selected addresses. No special effort was made to keep down the number of not-at-home and miscellaneous non-responses in this study. The investigators wanted a sample of about 100 persons known to have cash loans, and did not insist on repeated call-backs after that number of interviews had been taken. The proportion of refusals is more revealing. It was 9 percent, which is approximately the level in the annual Surveys of Consumer Finances. On the study of owners of savings accounts in the first field study, it will be recalled, the refusal rate was 20 percent. Reports from the interviewers confirm the difference which these statistics suggest. From the interviewers' point of view, the study of cash borrowers went smoothly and even easily, in contrast to the study of owners of

savings accounts. In other words, in the study of cash borrowers the strategy of starting with "easy" topics and working up carefully to the "hard" topics seems to have been reasonably successful.

Were there differences in response disposition attributable to the differences in interview treatment? Such variations in refusal rate from one treatment to another as appear in Table 35 are small enough to be attributed to random fluctuations.

There was one group of interviews lost subsequent to the completion of interviewing. Respondents were asked about the cash loans on which they were paying as of the first of the month in which the interview was taken. It was planned to proceed rapidly enough from sample selection to interview so that few or none of those selected would have paid off their loans before that date. Actually, 5 percent of the sample was lost in this manner. These respondents are excluded from all but one of the remaining tables in this chapter. The main analysis is based on 94 interviews with respondents known actually to have cash loans as of the date discussed in the interview.

Table 35. Response Disposition for Persons Known to Have Cash Loans in Relation to Experimental Manipulation of Felt Anonymity by Type of Interview
(Percentage distribution of addresses in sample)

Response disposition for persons known to have cash loans	All interviews	Interview treatment ^a		
		A	B	C
Interview	73	73	79	68
Had loan then	68	68	72	64
Had no loan then	5	5	6	4
Non-interview	27	27	21	32
Refusal	9	11	6	11
Other reason	17	16	15	21
Total	100 ^b	100	100 ^b	100
Number of borrowers	138	44	47	47

^aA. Interviewer checks before leaving that she has right respondent by name.

B. No use is made of respondent's name.

C. No use is made of respondent's name; sealed envelope technique.

^bDetail will not add to total because of rounding.

Response Error

The result of this study in terms of response error are summarized in Table 36. Of the respondents 39 percent reported the known loan. An additional 49 percent reported other cash loans or instalment purchases but not the loan in question. In some instances it was difficult to ascertain whether the respondent was reporting the selected loan incorrectly or reporting a different obligation. The criteria used in making a judgment on this point will be described later. Finally, 12 percent of the respondents reported no loans.

Since the judgment of the investigators entered into the establishment of criteria as to whether the known loan was reported, Table 37 was prepared on a different basis. It shows the number of cash loans reported by the respondent. In preparing this table the respondent's answers to the questions about cash loans were tabulated without any attempt to re-classify his obligations as between instalment purchases and cash loans. Of all respondents, 62 percent reported at least one cash loan. Thus, a number of respondents reported at least one cash loan but failed to report the selected loan. This table includes the respondents who had paid off the selected loan. If they were omitted, the proportion reporting a cash loan would be 65 percent.

The procedure of indicating the proportion who reported some loans but not the specific cash loan under study is carried through

Table 36. Response Error for Cash Loans in Relation to Interview Treatment
(Percentage distribution of interviews)

Response error for cash loans	All interviews	Interview treatment ^a		
		A	B	C
Reported known loan	39	30	38	50
Reported other loans only	49	56	44	46
Reported no loans	12	13	18	3
Total	100	99 ^b	100	99 ^b
Number of respondents	94	30	34	30

^aA. Interviewer checks before leaving that she has right respondent by name.

B. No use is made of respondent's name.

C. No use is made of respondent's name; sealed envelope technique.

^bDoes not add to 100 percent because of rounding.

Table 37. Number of Cash Loans Reported in Relation to
Interview Treatment
(Percentage distribution of interviews)

Number of cash loans in family as of first of month	All interviews	Interview treatment ^a		
		A	B	C
Reported some cash loans	62	56	54	75
One	29	31	19	38
Two	29	19	32	34
Three or more	4	6	3	3
Reported no cash loans	34	34	43	22
Not ascertained whether respondent had cash loans	5	9	3	3
Total	101 ^b	99 ^b	100	100
Number of interviews	101	32	37	32

^a A. Interviewer checks before leaving that she has right respondent by name.

B. No use is made of respondent's name.

C. No use is made of respondent's name; sealed envelope technique.

^b Does not add to 100 percent because of rounding.

most of the tables in this chapter. People who admit these other borrowings are cooperating at least partially with the interviewer. It is worth noting that a majority of those who reported any cash loan had more than one such loan at the time of interview.

Both Table 36 and Table 37 show an improvement in accuracy from the A interview treatment to the C interview treatment. Of the A respondents, 30 percent reported the known loan, compared with 38 percent of the B respondents and 50 percent of the C respondents (Table 36). Similarly, the proportion who reported that they owed money on a cash loan rises from 56 percent of the A respondents and 54 percent of the B respondents to 75 percent of the C respondents. Whether the differences between treatments are statistically significant depends on which measure of the difference is selected. The difference in Table 36 between the proportion reporting the known loan for C and the proportion reporting it for A and B combined is not significant (using the "two-tail" test). The difference in the same table between the groups in the proportion reporting no loans is significant. Thus, although the differences are not large from a statistical point of view, they are in the predicted direction, and

they are large enough to suggest strongly that the C technique is a definite improvement on the A technique.

Criteria Used in Identifying the Selected Loan

Four criteria were used in identifying the selected loan. Perhaps the most satisfactory way to describe these criteria and how they were used is to reproduce the instructions to the coders, which follow:

Does any cash loan or instalment purchase sound like "our" loan -- that is, the loan reported on the Lender Form? Consider all cash loans and instalment purchases as the same thing, i.e., a loan, for purposes of selecting the loan.

Accept as "our" loan a reported loan which "comes close" on any two of the four criteria below, with "comes close" defined as follows:

- (1) Amount of payment per month (or per payment period); it comes close if it is within \pm \$4 or 20 percent of the actual amount on the Lender Form, whichever gives the narrower range.
- (2) Purpose; to be close, any specific information given must agree in whole or in part.
- (3) Lending agency; to be close means in the same code category. Actual lending agency is always "personal loan company or small loan company."
- (4) Total number of payments originally agreed upon; to be close means within 2 payments. (NOTE: If loan has been refinanced or renewed and R confounds the two sets of payments, coder may substitute "Number of Payments Left to Make" with close defined, again, as within 2 payments.)

If there is no loan which "comes close" on two of the four criteria, do not accept any loan as "our" loan.

If there are two or more loans which could be taken as "our" loan according to the above criteria, select the one which comes closest on criteria (3) (lending agency) and (1) (amount of payment).

In practice the most important criteria were the amount of the payment per month and the identification of the type of lending agency. Of the 37 reports of loans accepted as reports of the loan under study, 92 percent were reported as coming from a small loan company or personal loan company (Table 40). It was rare for a respondent to report a loan which checked out as the selected loan on two of the other criteria without correctly describing the lender. The agreement on amount of payment per payment period also was close. Of the reports of loans accepted as reports of the loan under study, 65 percent were accurate within one dollar (Table 38). Only 16 percent were in error by \$5 or more.

Table 38. Response Error in Dollar Amount of Payment per Payment Period^a

	Number	Percent
Respondent understated by \$5 or more	3	8
Respondent understated by \$2 - \$4	2	5
Respondent was accurate with \pm \$1	24	65
Respondent overstated by \$2 - \$4	3	8
Respondent overstated by \$5 or more	3	8
Not ascertained from lending records	2	5
Number of known loans reported, and total percent	37	99 ^b

^a Criterion: with \pm \$4.

^b Does not add to 100 percent because of rounding.

A majority of respondents had the total number of payments correct, but many were in error on this point (Table 38). It must be recalled that the count of the number of payments may be complicated by missed payments.

By contrast, agreement as to the purpose of the loan was less close. The comparison of purpose could be made only for 37 interviews; this was true also of the other comparisons in Tables 39, 40, and 41. In nearly half of the cases, however, the purpose of the loan as stated in the interview was different from that reported by the lender. As to the amount of the loan and number of payments, the reports received from the lenders must be presumed to be correct unless a clerical error is involved. The nature of the lending agency also is known. But there is no assurance that the lender is better informed than the interviewer as to the purpose of the loan. Either report may be correct.

The accuracy of report of other items of information about the selected loan is indicated in Tables 42 and 43. These tables are based on the same 37 interviews, those in which the respondent reported a loan which was accepted as the selected loan by the procedure described earlier. The two variables shown in the tables were not taken into account in deciding whether the reported loan "came close" enough to be accepted. The first section of the table indicates that respondents have an understandable tendency to overestimate the number of payments which they have already made. This tendency is matched by a tendency to underreport the number of payments still to be made. This comparison is subject to some margin of error since the investigators sometimes were not certain how many payments had fallen due between the date of the known information and the date of interview. It is unlikely, however, that they were often in

Table 39. Response Error in Purpose of Known Loan^a

	Number	Percent
Respondent gave one purpose which was the same as that shown on lending records	8	22
Respondent gave one purpose which was in same broad category but not exactly the same	3	8
Respondent gave a purpose that was different from that shown on lending records but could have referred to same financial event	8	22
Respondent gave a purpose <u>different from</u> that shown on lending records	16	43
Not ascertained from lending records	2	5
Number of known loans reported, and total percent	37	100

^a Criterion: any specific information given must agree in whole or in part.

Table 40. Response Error in Report of Lending Agency

	Number	Percent
Correct:		
From a small loan company or personal loan company	34	92
Incorrect:		
From a savings institution	1	3
From a retailer	1	3
From a sales finance company	1	3
Number of known loans reported, and total percent	37	101 ^a

^a Does not add to 100 percent because of rounding.

Table 41. Response Error in Total Number of Payments Originally Agreed Upon^a

	Number	Percent
Respondent underreported	8	22
Respondent reported exactly same total number of payments shown on lending records	21	57
Respondent overreported	4	11
Comparison not possible	4	11
Number of known loans reported, and total percent	37	101 ^b

^a Criterion: within \pm 2 payments.

^b Does not add to 100 percent because of rounding.

error by two or more payments, which is the margin of accuracy shown.

Income

The relation between income and response error for reports of cash loans is shown in Table 44. Income is significantly and negatively related to accuracy of report of cash loans. Of those families with incomes under \$5,000, 58 percent reported the known loan; 31 percent of the families with incomes between \$5,000 and \$9,999 reported the known loan; and a mere 11 percent of the families with incomes of \$10,000 and over, reported the known loan. Before attempting an interpretation of such figures, it should be noted that income is even more strongly related, but in the opposite direction, to the "reported other loans only" category of response error. This latter error category is characterized by a very high number of reports of instalment purchases, while the "known loan" category pertains only to the cash loan of interest to the investigators (although it might have been reported by the respondent as an instalment purchase).

Considering both income effects at once, it is immediately clear that family income is a variable which is proximate and sensitive to

Table 42. Response Error for Number of Payments Made

	Number	Percent
Respondent underreported by 2 or more payments	3	8
Respondent was accurate within \pm 2 payments	19	51
Respondent overreported by 2 or more payments	11	30
Comparison not possible	4	11
Number of known loans reported, and total percent	37	100

Table 43. Response Error for Number of Payments Left to Make

	Number	Percent
	Respondent underreported by 2 or more payments	15
Respondent was accurate within \pm 2 payments	14	38
Respondent overreported by 2 or more payments	3	8
Comparison not possible	5	14
Number of known loans reported, and total percent	37	101 ^a

^a Does not add to 100 percent because of rounding.

the type of response error under investigation in this study. A more elaborate interpretation would run along the following lines: The self-concept of the adult individual includes a perceived status position, a good part of which is a function of the level of income. The perceived self-status involves a large range of values and behavioral expectations, such values and expectations being generated by the normative behavior of those persons who form the status reference group for the individual. Now, for a person with a high or moderately high income to admit that he had to borrow cash to meet his expenses would be incongruent with his perceived status position. Such disapproval would not exist for the very low income families, since cash borrowing is a much more common phenomenon in that group and is logically more congruent with their financial position. On the other hand, instalment purchases do not meet with disapproval in

Table 44. Response Error for Cash Loans in Relation to Income of Family (Percentage distribution of interviews)

Response error for cash loans	All interviews	Income of family ^a		
		Under \$5,000	\$5,000-\$9,999	\$10,000 and over
Reported known loan	39	58	31	11
Reported other loans only	49	28	58	78
Reported no loans	12	14	10	11
Total	100	100	99 ^b	100
Number of respondents	94	36	48	9

^a Excludes 1 respondent for whom income was not ascertained. He reported other loans only.

^b Does not add to 100 percent because of rounding.

AN INVESTIGATION OF RESPONSE ERROR
 Table 45. Response Error for Cash Loans in Relation
 to Education of Head of Family
 (Percentage distribution of interviews)

Response error for cash loans	All interviews	Education of head of family		
		Eighth grade or less	High school	College
Reported known loan	39	33	41	47
Reported other loans only	49	46	48	53
Reported no loans	12	21	11	--
Total	100	100	100	100
Number of respondents	93 ^a	24	54	15

^a Excludes 1 respondent for whom education was not ascertained; he reported other loans only.

the higher income groups, and persons in those groups, if they report any cash indebtedness, will be much more likely to report instalment purchases. The low proportion of low income respondents reporting "other loans only" (28 percent) is explained by the fact that a majority of those people had already been assigned to the higher priority "reported known loan" category.

Education

Table 45 shows the relation between education and response error. The table shows that education is positively correlated with reporting the known loan, a surprising result. Income is negatively correlated with reporting the loan, as just discussed, and income is positively correlated with education. Evidently it is specifically high economic status which leads to reluctance to report cash loans rather than socio-economic status in some general sense. It is also possible that people with higher education are more favorably inclined toward social research.

Occupation

There was no relation between whether the head of the family was employed in a white-collar or blue-collar position and response error in reports of cash loans (Table 46). Exactly 40 percent of those in each occupation group reported the known loan. The result is in contrast to that found in the study of response error in reports of large savings accounts in the East Coast area. It will be recalled that in

Table 46. Response Error for Cash Loans in Relation to Occupation of Head of Family
(Percentage distribution of interviews)

Response error for cash loans	All interviews	Occupation of head of family	
		White-collar worker	Blue-collar worker
Reported known loan	39	40	40
Reported other loans only	49	53	45
Reported no loans	12	7	15
Total	100	100	100
Number of respondents	92 ^a	30	62

^a Excludes two respondents for whom occupation was not ascertained.

that study there was a substantial difference between occupation groups in accuracy of report. This contrast between the studies parallels the contrast in the relation between income and accuracy. This topic will be discussed further in a later chapter.

Age of Head

With regard to age of head the data from the present study do confirm the tendency which has been found in the earlier parts of the investigation for people under 45 to report more accurately than those in the older age groups. The difference in the proportion of accurate reports, shown in Table 47, is near the margin of statistical significance. The difference in the proportion who report no loans at all, however, is easily significant at the 95 percent level of confidence. This difference may be the result of differences in attitudes toward borrowing from one age class to the next.

Sex of Respondent

Most of the respondents in this project were men. The small size of the sample of women respondents makes it impossible to rely on the differences shown in Table 48. The data do point in the direction of more accurate reports from male than from female respondents, but the results are not statistically reliable.

Relationship of Borrower to Respondent

In this study the interviewers attempted to interview the person who had borrowed the money. They were instructed to interview the

Table 47. Response Error for Cash Loans in Relation to
Age of Head of Family
(Percentage distribution of interviews)

Response error for cash loans	All interviews	Age of head of family ^a	
		Under 45	45 and over
Reported known loan	39	51	31
Reported other loans only	49	49	48
Reported no loans	12	--	21
Total	100	100	100
Number of respondents	94	41	52

^a Excludes 1 interview in which age of the head was not ascertained.

head of the family if the name on the list given to them was a man. If the name was that of a woman, they were to interview the wife of the head. The results in Table 49 indicate that in 85 out of 94 of the cases under study the interviewer, in fact, was successful in interviewing the borrower. Since there were only 9 interviews in which the borrower was not the respondent, not too much can be made of the comparison of accuracy of response between the interviews where the borrower was the respondent and where the borrower was not the respondent. The data do point in the direction of more accurate

Table 48. Response Error for Cash Loans in
Relation to Sex of Respondent
(Percentage distribution of interviews)

Response error for cash loans	All interviews	Sex of respondent ^a	
		Male	Female
Reported known loan	39	45	19
Reported other loans only	49	47	50
Reported no loans	12	8	31
Total	100	100	100
Number of respondents	94	75	16

^a Excludes 3 respondents for whom sex was not recorded.

Table 49. Response Error for Cash Loans in Relation to Whether Borrower was Respondent (Percentage distribution of interviews)

Response error for cash loans	All interviews	Relationship to borrower to respondent	
		Borrower is respondent	Borrower is not respondent
Reported known loan	39	42	11
Reported other loans only	49	47	67
Reported no loans	12	11	22
Total	100	100	100
Number of respondents	94	85	9

replies when the borrower was himself the respondent in the interview. This result, of course, is in the direction that one would anticipate.

Attitudes Toward Borrowing

In this study a careful attempt was made to measure the attitudes of the respondents toward borrowing money. The procedure used was to ask the respondents questions of the following type: "How do you feel about borrowing or using credit to cover the expense of a vacation trip? Do you feel it is usually a good idea? Sometimes a good idea? Never a good idea?" This type of question was repeated for the following other possible purposes of borrowing, as well as for "vacation trips": to pay taxes, to purchase jewelry, for educational purposes, to cover expenses due to illness, to pay bills that have piled up, to purchase a car, and to purchase furniture. A composite score was constructed from the responses to these eight questions. The method was to assign two points for each item to which the respondent said "usually a good idea" and one point for each item to which a respondent said "sometimes a good idea." The possible total score thus ranged from 0 to 16.

The relation between this score and accuracy of response error is shown in Table 50. The hypothesis was that those individuals with a favorable attitude toward borrowing would be more willing to report any debts which they might have incurred, and, in particular, would be more willing to report the known cash loan. The results tend to support this hypothesis. Of those with unfavorable attitudes toward borrowing, that is, those who score 0 to 5, 30 percent reported the known loan. Of those with the most favorable attitudes toward borrowing, that is, a score of 10 to 13, 47 percent reported the known loan.

Table 50. Response Error for Cash Loans in Relation to Score on Attitudes Toward Borrowing (Percentage distribution of interviews)

Response error for cash loans	All interviews	Score on attitudes toward borrowing ^a		
		Unfavorable (Score 0-5)	Middle (Score 6-9)	Favorable (Score 10-13)
Reported known loan	39	30	40	47
Reported other loans only	49	39	56	43
Reported no loans	12	30	4	9
Total	100	99 ^b	100	99 ^b
Number of respondents	94	23	50	21

^a This is a composite score from the responses to eight questions asking about attitudes toward borrowing for eight particular purposes (to finance a car, in case of illness, to purchase jewelry, and so forth. The responses were scored as follows:

- Usually a good idea 2 points
- Sometimes a good idea 1 point
- Never a good idea 0 points
- Don't know 0 points

The composite score shown in the table is the sum of the scores for each of the eight questions. Thus, the possible scores ranged from 0 to 16.

^b Does not add to 100 percent because of rounding.

On the other hand, of those with unfavorable attitudes toward borrowing, 30 percent reported no loans at all. Of those with either middle or favorable attitudes toward borrowing less than 10 or 9 percent reported no loans at all. Evidently, people who are ashamed to borrow money fail to report their borrowing in an interview situation.

The existence of this relationship may have unfortunate implications in some circumstances. Frequently it is important to measure the relationship between people's attitudes and their behavior. These results suggest that a relation between a favorable attitude toward, say, borrowing, and frequency of borrowing may appear in the results of surveys for spurious reasons. A favorable attitude toward the behavior may lead to more complete reporting of the behavior; those with favorable attitudes will appear to borrow more than those with unfavorable attitudes merely because those favorably disposed report their borrowing more completely.

These results have implications for the theory of response error and for the design of questionnaires which should be kept in mind in survey work.

Conformity Score

In studying the results from the interviews taken in the fall of 1958 with owners of large savings accounts, the investigators speculated that conformity tendencies of respondents might be important. They were especially interested in trying to understand why some respondents would fail to report the existence of a financial fact while others would admit the existence of a savings account but openly refuse to tell the interviewer anything about the balance. They speculated that people with a high tendency to conform to social dicta might find it difficult to refuse outright to cooperate with an interviewer in what is, after all, a social situation.

In order to measure the importance of this variable, the investigators constructed a special conformity score. The items in this score were the following:

- H2. In a social gathering, if you find you are not dressed like the other people there, does it make you feel uncomfortable or don't you care very much?

Makes me feel
uncomfortable

Don't care
very much

- H3. When people disagree with you, do you sometimes start to wonder whether you're right, or do you nearly always feel sure of yourself even when people disagree with you?

Wonder

Feel sure

H5. Do you feel that children ought to be brought up to be different from their playmates or as much like them as possible?

Ought to be
different

As much like them
as possible

H7. Do you feel that people are better off if they think and act like the people they associate with or if they stand out as being different?

Think and act
like associates

Stand out
as different

A score was constructed by adding together the answers to these items. In some interviews respondents insisted on a middle position to one or more items, or said they "didn't know." The scoring procedure was to count two for a "conformist" answer, one for a middle position or "don't know," and zero for a "non-conformist" answer. Thus, the low score indicates a low tendency to conformity, and the high score indicates high conformity, with a possible range of 0-8.

The relation between this score and response error is shown in Table 51. The proportion who reported the known loan went from 20 percent of those with low conformity to 40 percent of those with low middle conformity, and reached a peak of 71 percent of those in the middle of the range, then fell to 43 percent of those in the high middle range and 18 percent of those with high conformity scores. It is a remarkably symmetrical relationship, with the peak of accuracy in the middle range of the conformity score (Table 51).

The investigators cannot claim that they predicted this relationship in advance. After the event, of course, it is not impossible to fit a hypothesis to the data. It may be that people with low conformity scores are not susceptible to the influence of the interviewer and do not respond to her request for information. At the other end of the scale, people with high conformity scores may be unwilling to admit to such doubtful behavior as borrowing cash from a small loan company.

Those in the middle conformity range, on the other hand, seek the approval of others just as the extreme conformers do, but the middle conformers are less anxious about it and therefore can take the time to allow a definition of what is "right" and "wrong" in the situation to develop on the basis of cues from the interviewer. Thus, they will tend to be more subject to influence by the interviewers than will either the very low or the very high conformers. This result must be taken, for the present, as no more than a suggestive clue for further speculation and research.

Table 51. Response Error for Cash Loans
in Relation to Conformity Score
(Percentage distribution of interviews)

Response error for cash loans	All interviews	Conformity score ^a				
		Low (0, 1)	Low middle (2, 3)	Middle (4)	High middle (5, 6)	High (7, 8)
Reported known loan	39	20	40	71	43	18
Reported other loans only	49	50	56	21	43	71
Reported no loans	12	30	4	7	14	12
Total	100	100	100	99 ^b	100	101 ^b
Number of respondents	94	10	25	14	28	17

^a Based on four forced-choice questions designed to measure conformity to obvious social dicta.

A low score indicates low conformity; a high score indicates high conformity.

^b Does not add to 100 percent because of rounding.

Personal Effectiveness

In addition to the conformity items discussed above, four other forced-choice items were used; they were designed to measure the respondent's perception of the effectiveness of his own plans and actions as follows:

- H1. Have you usually felt pretty sure your life would work out the way you want it to, or have there been times when you haven't been very sure about it?

Pretty sure

Sometimes not
very sure

- H4. Do you feel that you are the kind of person that gets his share of bad luck, or do you feel that you have mostly good luck?

Mostly good luck

Bad luck

- H6. Would you say that quite often you have trouble making up your mind about important decisions, or don't you feel you ever have much trouble making up your mind on important decisions?

Not much trouble

Quite often

- H8. When you make plans ahead do you usually get to carry things out the way you expected, or do things usually come up to make you change your mind?

Things work out
as expected

Have to change
plans

The items were scaled by a modified Guttman technique and scale scores were assigned to the individual respondents, with a score of 0 indicating a low personal effectiveness self-percept and a score of 4 indicating high personal effectiveness. The relationship of perceived personal effectiveness to response error is shown in Table 52. Of the low effectiveness respondents 71 percent reported the known loan, while only 20 percent of the high effectiveness respondents were accurate. The difference is statistically significant beyond the 95 percent level, and the relationship between response error and effectiveness is negative.

The investigators were gratified to find that their hunch about

Table 52. Response Error for Cash Loans in Relation to Personal Effectiveness (Percentage distribution of interviews)

Response error for cash loans	All interviews	Personal effectiveness ^a				
		Low (0)	Low middle (1)	Middle (2)	High middle (3)	High (4)
Reported known loan	40	71	25	46	40	20
Reported other loans only	48	29	50	36	55	73
Reported no loans	12	- ^b	25	18	5	7
Total	100	100	100	100	100	100
Number of interviews	91 ^c	14	20	22	20	15

^a Based on four forced-choice questions designed to measure an individual's perception of the effectiveness of his own actions and plans. The four items were scaled by modified Guttman technique; a low score indicates low personal effectiveness, a high score high personal effectiveness.

^b Less than 0.5 percent.

^c Excludes 3 respondents who responded in a not-ascertainable fashion.

Table 53. Personal Effectiveness in Relation to Tendency to Conform to Obvious Social Dicta
(Percentage distribution of interviews)

Personal effectiveness ^b	All interviews	Conformity score ^a	
		Low conformity	High conformity
Low (0)	14	12	17
Low middle (1)	21	20	23
Middle (2)	25	28	20
High middle (3)	24	24	23
High (4)	16	16	17
Total	100	100	100
Number of interviews	97 ^c	49	48

^aBased on four forced-choice questions designed to measure conformity to obvious social dicta. "Low conformity" includes scores 0-4; "High conformity" includes scores 5-8.

^bBased on four forced-choice questions designed to measure an individual's perception of the effectiveness of his actions and plans. The four items were scaled by a modified Guttman technique; a low score indicates low personal effectiveness, a high score high personal effectiveness.

^cExcludes 4 respondents who gave non-ascertainable responses to the effectiveness items.

the importance of personal effectiveness was correct, but puzzled by the direction of the relationship. They suspected that the effectiveness and conformity scores might be related, but this suspicion proved to be unfounded (Table 53). The following interpretation of the data may be offered tentatively: people with high scores on effectiveness are able to resist the pressure from the interviewer to report their financial situation, but those with low scores simply do as the interviewer requests because they lack the self-confidence to do otherwise.

Keeping Financial Records

The reader will recall that respondents who said they kept records of money spent were more likely to report accurately their savings accounts in the first field study. This relationship disappears in the present study. If anything, the reverse is true. Of those who keep records, fewer report accurately than of those who keep no records (Table 54). Once again, a relationship found for savers is reversed

Table 54. Response Error for Cash Loans in Relation to Whether the Respondent Keeps Financial Records (Percentage distribution of interviews)

Response error for cash loans	All interviews	Keeps records of money spent	
		Keeps some records ^a	Keeps no records
Reported known loan	39	35	61
Reported other loans only	49	53	28
Reported no loans	12	12	11
Total	100	100	100
Number of respondents	92 ^b	74	18

^a Includes 19 respondents who reported that they kept check stubs or cancelled checks only.

^b Excludes 2 respondents for whom it was not ascertained whether or not they keep records.

for cash borrowers. In view of the small number of respondents who say they keep no records of money spent (18 interviews), the investigators are inclined not to stress this result pending replication, preferably with a larger sample.

Purpose of the Loan

In all but nine interviews information about the purpose of the loan was obtained from the lending records. Table 55 was constructed to test the hypothesis that people will tend to report accurately loans made for socially acceptable purposes. The data do suggest that the hypothesis contains some truth. A great many people do purchase goods on the instalment plan, and that fact is widely publicized. Again the number of observations is too small to permit definite conclusions, but to find that borrowing in connection with purchases of consumer foods is well reported is consistent with the interpretation that people report easily what they see as socially acceptable.

Conclusions

In this chapter it has been shown that there is an association between reporting cash loans accurately and each of the following considered separately:

Table 55. Response Error for Cash Loans in Relation to Purpose of Loan
As Obtained from Lending Records
(Percentage distribution of interviews)

Response error for cash loans	All interviews	Purpose of loan as obtained from lending records ^a					
		Consumer good (cars, Christmas purchases, etc.)	Living expenses	Consolidation of debt, re-financing, paying taxes	Travel, vacation, repairs, insurance	Medical bills, funeral expense	Other
Reported known loan	39	71	50	42	20	14	20
Reported other loans only	49	14	33	50	73	71	60
Reported no loans	12	14	17	8	7	14	20
Total	100	99 ^b	100	100	100	99 ^b	100
Number of respondents	94	14	6	38	15	7	5

^a Excludes 9 respondents for whom the purpose of the loan was not ascertained from the lending record.

^b Does not add to 100 percent because of rounding.

Interview treatment C ("sealed envelope" technique)
Income below \$5,000
College education
Age below 45
Favorable attitudes toward borrowing
Middle position on a conformity scale
Low personal effectiveness

The evidence is less clear but suggests an association between accuracy of report and the following:

A male respondent
The borrower being the respondent
Keeping no records of money spent
Purpose of borrowing socially acceptable

There is little or no evidence of association between accuracy of report and the white-collar or blue-collar occupation of the head of the family.

VII. REPORTS OF SAVINGS ACCOUNTS: THE THIRD FIELD EXPERIMENT

The second of the field experiments conducted in 1959 was an additional study of owners of large savings accounts. The investigators were fortunate in obtaining the cooperation of a savings institution in another eastern city. This study was planned and carried out concurrently with the study of cash borrowers reported in the previous chapter.

Purposes of the Study and Description of Procedures

Purposes

It was apparent as the results of the first field study came in that further effort could well be expended in the attempt to understand and, if possible, to reduce response error in reports of savings accounts. For the most part the arrangements for the experiment in the first study were felt to be satisfactory and were carried over into the new investigation. Some changes in the procedures in such matters as sampling and validation were introduced; these will be described later. The major changes, however, were in interviewing technique.

Need for Anonymity

In this project, as in its predecessors, it was of crucial importance to protect the confidentiality of data about the persons to be interviewed. The problem differed slightly from that in the first study since only one financial institution was involved. As was done in the study of cash borrowers, the precaution of including in the sample a number of names and addresses which were simply selected from the telephone book was adopted here. These "dud" interviews, as they were familiarly called, were excluded from the analysis. Otherwise the procedures used were similar to those in the other field study of savings accounts.

Sample Selection

The sample was selected by the staff of the savings institution in accordance with plans developed in the sampling section of the Survey Research Center. The purpose of the sampling procedure was to obtain a probability sample of the savings accounts of the institution exclusive of accounts with balances under \$500 or over \$15,000 and exclusive of accounts owned by minors, by organizations, or by anyone other than adults living in the metropolitan area or its vicinity. Account owners were dropped out unless a current address which

checked with the telephone directory could be found for them. The basic method was to draw a sample of account numbers and drop out account numbers which did not meet the criteria set up.

A two-stage sampling procedure was used, in which the first step was the selection of some of the branches of the institution from a list of all branches, and the second step was the selection of accounts within the branches. This procedure had two advantages: it made it unnecessary to set up a clerical operation to select accounts in every branch, and it tended to group together somewhat the addresses to be visited by the interviewer, thus saving time in the actual interviewing. The procedure had a disadvantage, however: it made necessary the use of a different sampling interval in each branch. The result, however, was a random sample of all accounts which was self-weighting; that is, there was no need to use weights in the analysis to compensate for a variable sampling fraction. This procedure, of course, was more convenient for the analyst than that used in the preliminary savings account study reported in Chapter II.

To summarize, if the account or the depositor was characterized by one or more of the following, the account and the depositor were dropped from the sample:

- (1) The account had been closed.
- (2) This was a Christmas Savings Account.
- (3) This was the account of a minor.
- (4) This was an account held in trust.
- (5) This was an organization account
(e.g., religious, fraternal, or educational group).
- (6) The depositor's address was obviously outside the city.
- (7) The current balance in the account was less than \$500 or exceeded \$15,000.

Validation Procedure

The procedure for validation was similar to that used in the previous study of savings accounts. After completion of the interviewing, the investigators transmitted a form to the savings institution and obtained information from it which enabled them to carry out this analysis.

Experimental Manipulations

This project, like the study of cash loans, was planned in the light of a developing theory of response error. The specific line of reasoning on which the experimental manipulations were based was set forth before the questionnaire was developed as follows:

"The main difficulty with the interview situation is that the forces on the respondent to communicate are not strong enough.

What is needed is a new and powerful force to communicate. The money may go to them directly or to third parties designated by them. But the fact that the researcher will pay a substantial amount for information has two values. It not only rewards the respondent for his efforts, it indicates to the respondent that the interviewer sets a high value on the information asked for. The effect will be to make the respondent take the inquiry more seriously.

“The attempt to increase positive motivation must be accompanied by an attempt to reduce forces in the opposite direction. If the procedure results only in an increase in conflict between opposing forces, the result will be to raise the tension-level for the respondent. The consequences of an increase in tension are likely to be unfortunate; for example, it may lead to aggression toward the interviewer or to an attempt to escape from the situation. Hence, every effort should be made to reduce the threat to the respondent in the interview situation by such measures as assurance of anonymity.”

The most satisfactory way to describe the manipulations themselves may be by repeating the language used in the formal instruction to the interviewers:

“The interviews in the sample have been divided on a random basis into four groups. We hope to compare the accuracy of response from group to group. The principal difference from the point of view of interviewing procedure is that respondents in groups A and B will not be paid, while those in groups C and D will be given \$10 each. A difference in sampling procedure will be introduced between A and C on the one hand and B and D on the other: in A and C the designated respondent will be the head of the family; if the family is a married couple, the respondent will be the husband. In B and D the designated respondent will be the wife of the head. In summary:

<u>Group</u>	<u>Reward</u>	<u>Designated Respondent</u>
A	No payment	Head
B	No payment	Wife of head
C	\$10	Head
D	\$10	Wife of head

“After the interviews have been taken and analyzed it will be possible to compare the results from interviews with respondents who were paid and respondents who were not paid. The hypothesis is that those who were paid will give more complete and accurate information.

“It will also be possible to compare results where the respondent is the wife with results where the respondent is the husband.

To interview the husband costs both extra trouble and expense, and it is proposed to measure the accuracy of the information from the husband to see whether there is a gain in accuracy corresponding to the effort expended.

* * * *

You should proceed as follows:

1. Locate the address on the cover sheet.
2. Locate the right family. The right family is the one which includes the person or persons named on the sticker on the cover sheet.
 - a. Do not use the name on the cover sheet in asking for the respondent unless you are in doubt as to whether you have the right family.
 - (1) If the address is a single family dwelling and the people have lived there a year or more, it is reasonably safe to assume you have the right family.
 - (2) If the address is a multiple family dwelling or apartment house and the right name appears by the doorbell, it is reasonably safe to assume you have the right family.
 - (3) If there are several families in the same building and no way to tell them apart, you may need the name. If R asks where you got the name, you may mention that we do sample from lists such as telephone books and city directories but that you do not know what the exact procedure was in this instance.

For A and C addresses

3. The designated respondent is the head of the family.
 - a. You should interview the husband if possible. It is better to interview the wife than to take a non-response for the family, however.

For B and D addresses

3. The designated respondent is the wife of the head of the family, if such a person exists. Otherwise, it is the head.
 - a. When the designated R is the wife, you should make every effort to complete the interview with her. It will be acceptable to leave the financial form with her and come back the next day to complete the interview after she had had a chance to consult her husband. Try to avoid coming back in the evening to see the husband yourself. However, if R insists that the husband is the one for you to see, you may talk to him. (It is not satisfactory to leave the financial form to be filled in and mailed later by R - - it would be too easy to forget to mail it.)

In these interviews use was made of a financial form which was to be mailed in separately in a sealed envelope. In this respect the procedure resembled that in the C interviews with cash borrowers. The instructions with regard to the use of the form read as follows:

"The forms are sufficiently complicated so that we do not think it a good idea as a general rule to hand them to R and let him fill them out all by himself. We would like you to go through the form with him. Usually we expect you will enter the numbers. But if he understands what particular items he should fill in, it is satisfactory to let him enter them and seal the form in the envelope without showing the numbers themselves to you."

Use of Respondent's Name

In the first field study, it will be recalled, the respondent was asked for by name, while use of the name was controlled in the study of cash borrowers as part of the experimental manipulation. As had been indicated previously, the instructions in the present study were to avoid asking for the respondent by name unless there was no other way to resolve doubts as to whether the interviewer was talking to the right person. The interviewers often exercised considerable ingenuity in order to make certain that they had the right respondent while avoiding asking for him by name. The following illustrates a procedure that was used to identify a respondent.

Faced with a private house with one bell but with five names over the bell, the interviewer noticed that the respondent's name was the fourth, so she rang the bell four times. When a woman came downstairs, the interviewer explained that she hadn't known "how to get my fifty-eighth dwelling unit, but I wanted the fourth family who lived in this building." The woman answered, "Well, my name is fourth on the list, so I guess you must mean me." Thus, the right respondent was found.

The Questionnaire

The questionnaire used in this project differed from that used in its predecessors in one major respect. The investigators believed that respondents should be paid for work done. Thus, they felt no compunction about asking for a fairly complete financial report. It was anticipated that the respondents would react better to the payment if they could see that they were expected to exert themselves in order to earn it. Also, of course, the investigators were interested in a technique for obtaining complete financial reports. The questionnaire appears in Appendix B.

The topics of the questionnaire in the order asked were as follows:

Current economic attitudes

Financial management

Banking, including a discussion of bank services used, choice of bank, and interest on savings accounts

Attitudes toward borrowing from a bank or loan company

Personal data

Financial form

Part 1. Family income (asked in detail)

Part 2. Savings (five pages on liquid assets, purchases, debt, and related topics)

After the interview a mail questionnaire similar to that used in the study of cash borrowers was sent to respondents. Results are reported in Chapter VIII.

Interviewers' Reactions

In planning this study the investigators took the position that the reactions of the interviewers to the project as a whole and to the experimental procedures would be of importance. The questionnaire to be used was pre-tested by the same interviewers as those who were to participate in the main study. One of the staff spent several days with them in connection with the pretest and later training.

The reaction of the interviewers to the idea of paying respondents was less than enthusiastic. As the study progressed they came to feel that the technique was not working well. A suggestion was made for improving the technique, which came, unfortunately, too late to be tried. The difficulty, it was suggested, may be that it is not easy

for the respondent to accept or reject an offer of money in the presence of another person (the interviewer). In fact, the pressure which this puts on the respondent may well cause enough stress to prevent him from reacting in the way the investigators desire. It was proposed that the form be left for the respondent to fill out and mail in by himself, together with the request for payment. This arrangement would have emphasized the privacy of the information, which the interviewer would never see. It also would have given the idea of payment time to sink in: the respondent would be able to decide at leisure whether or not it would be worth his while to fill out the form and mail it to the University. As was noted earlier, this variation on the procedure was not in fact used since it was not proposed until too late.

Error of Non-Response

In this study a total of 153 accounts fell into the final sample. The "dud" addresses selected from the telephone book were excluded from this total, as were the addresses which proved to be incorrect. The interviewers were successful in obtaining interviews at 58 percent of these addresses as shown in Table 56. They were refused interviews at 29 percent of the addresses, and other reasons for not getting an interview accounted for 13 percent of the total.

This response rate is extremely low. It is the lowest of the three experimental studies described in this section of the report. It will be recalled that the response rate in the first field study was 65 percent, with a refusal rate of 20 percent and other non-responses, 15 percent. The difference, in other words, is in the refusal rate. In the study of cash borrowers the refusal rate was 9 percent. Why were the interviewers so often unsuccessful in the present study?

One place to look for an explanation is in the nature of the respondents. It may be argued that people with large savings accounts are difficult to interview. This explanation is consistent with the difference between the studies of savings accounts on the one hand and both the study of cash borrowers and the general experience of the Center in financial surveys on the other hand. The investigators are inclined to accept the interpretation as one element in the situation.

The hypothesis that people with large savings accounts are hard to interview can not explain the difference in refusal rate between the first study and the third study (the present one). True, there was a difference between the cities in size of account. In the city involved in the first study, the mean value of all accounts selected in the sample was \$3,478, compared with \$2,572 in the present study (Tables 15 and 57). It will be recalled that the sample in the first experiment was selected with a minimum balance of \$1,000 or more,

Table 56. Response Disposition in Relation to Size of Actual
Balance in Account on January 1, 1959
(Percentage distribution of accounts in the sample)

Response disposition	All accounts	Size of actual balance on January 1, 1959 ^a					
		\$0- \$499	\$500- \$999	\$1,000- \$1,999	\$2,000- \$2,999	\$3,000- \$4,999	\$5,000 or more
Interviews	58	65	66	51	64	52	52
Non-interviews	42	35	34	49	36	48	48
Refusal	29	15	31	32	27	43	22
Other	13	20	3	17	9	5	26
Total	100	100	100	100	100	100	100
Number of accounts	153	20	32	35	22	21	23

^a For accounts opened after January 1, 1959, the check-date used was July 1, 1959.

Table 57. Response Disposition in Relation to Mean Actual Balance in Account on January 1, 1959^a

Response disposition	Mean actual balance	Number of accounts
	On January 1, 1959	
Interview	\$2,394	89
Non-interview	2,819	64
Refusal	2,704	44
Not at home	3,287	12
Other	2,749	8
All accounts	2,572	153

^a For accounts opened after January 1, 1959, the check-date used was July 1, 1959.

compared with a minimum of \$500 in the present study. But the evidence for a relation between size of balance and interview rate is not very powerful, and if anything, Table 56 shows some tendency for the response rate to be lower for accounts over, say, \$3,000. The relationship in the first field study was similar. Thus, one would expect a higher refusal rate in the first than in the present study if size of account were the deciding factor, whereas the reverse is what happened.

A second possible explanation is in terms of the differences between the interviewing staffs in the cities in which the two studies took place. The staff in the "first" city is larger, and, therefore, more carefully supervised. One of the Center's staff of field supervisors lives in that city and maintains careful control over the field work there. This type of supervision is not carried out in the other city, where the present study took place. The difference in response disposition may reflect that difference.

A third possibility is that the difference between the two projects is the result of the experimental manipulations in the present study. This possibility is explored in Table 58. The results in that table show a striking difference between paid and unpaid respondents. The interviewers were successful in obtaining an interview from two-thirds of the unpaid respondents but only from half of the respondents who were designated as falling in the part of the sample to be paid. There was no difference between proportions of the sample in which the head was designated as the respondent in contrast to those in which the wife was the designated respondent.

Table 58. Response Disposition in Relation to Preferred Interviewing Technique
(Percentage distribution of accounts in sample)

Response disposition	All accounts	Pay		No pay	
		Preferred respondent ^a		Preferred respondent ^a	
		Head	Wife	Head	Wife
Interviews	59	57	46	67	66
Non-interviews	41	43	54	33	34
Refusal	27	27	35	23	21
Other	14	16	19	10	13
Total	100	100	100	100	100
Number of accounts	151 ^b	37	37	39	38

^a Interviews were assigned to one of the two (head or wife) respondents by the central office; interviewers, though, were allowed to depart from the preferred respondent if the field situation called for it.

^b Excludes 2 accounts regarding which the wrong respondents were interviewed.

The difference between the paid and unpaid respondents is reminiscent of the difference between the structured and unstructured interviews in the first field study. Again, the new technique is associated with a high non-interview rate. This result suggests that interviewers may lack confidence in using any dramatically different technique. This lack of confidence may communicate itself to the respondents at the crucial stage when the decision is being made by the respondent concerning whether or not to grant an interview. The difference between the response rates for respondents in the paid and unpaid halves of this sample is by itself enough to indicate that the technique of paying the respondents as it was tried in the present investigation was not a success.

If attention is restricted to the standard questionnaire of the first field study and the unpaid respondents in the present study, some difference in response rate in favor of the first study remains. As has been previously suggested, this difference may be a result of closer supervision in the city where the first study took place.

Response Error

The results of this study in terms of error in response are summarized in Tables 59 and 60. As shown in Table 59, about one respondent in four failed to report the selected account. Of these, however about half failed to report an account which was owned wholly or in part by someone other than the respondent and his spouse.

Table 59. Response Error for January 1, 1959, Balance in Relation to Preferred Interviewing Technique (Percentage distribution of interviews)

Response error for January 1, 1959, balance	All inter-views	Pay		No pay	
		Preferred respondent ^a		Preferred respondent ^a	
		Head	Wife	Head	Wife
Failed to report account	26	18	32	24	30
Account owned by respondent or spouse or the two jointly	11	11	12	10	12
Account owned entirely or in part by someone other than respondent and spouse	15	7	20	14	18
Reported account, balance not ascertained	15	27	4	10	18
Reported account but refused to state balance	15	27	4	10	18
Reported a total in several accounts but would not break it down ^b	-- ^c	-- ^c	-- ^c	-- ^c	-- ^c
Reported balance for account	59	55	64	66	52
Underreported by \$1,000 or more	10	4	16	14	6
Overreported by \$1,000 or more	4	4	-- ^c	14	-- ^c
Accurate within \$1,000	45	47	48	38	46
Total	100	100	100	100	100
Number of interviews	89	26	25	21	17

^a Interviews were assigned to one of the two (head or wife) respondents by the central office; interviewers, though, were given the freedom to depart from the preferred respondent if the field situation called for it.

^b None of these interviews fell in this category of response error; therefore, this category is omitted from all subsequent tables in this chapter.

^c Less than 0.5 percent.

Of all respondents 15 percent reported the account but failed to report the balance in the account. In this study there were no cases in which a respondent reported a total in several accounts and refused explicitly to break down the total. It is possible, of course, that some respondents reported a total but failed to label it as such.

Of the respondents 59 percent reported a balance for the selected savings account. Of these 45 percent were accurate within \$1,000. This result compares favorably with that for the first field experiment where the response error in the report of the balance in the fall of 1958 was, if anything, somewhat higher. Only 34 percent of those respondents were accurate within \$1,000. However, in view of the smaller size of the accounts in the present study, this difference should not be taken as important.

There was little or no difference between the paid and unpaid portions of the sample in response error. The observed differences in this respect, shown in Table 59, are well within the margin of sampling error. The technique of paying respondents failed to produce an improvement in accuracy in this study. (It is not known, of course, what might have happened if the technique used had been different. Specifically, it is not known what might have taken place if the technique proposed at the end of the previous section had been used.)

The data also show little difference in accuracy between those interviews in which the head was the preferred respondent and those in which the wife was the preferred respondent. It will be recalled that the designation of the head as the preferred respondent did not require the interviewer to insist on interviewing the head, and the same was true for the wife. For example, the interviewer was permitted to interview the husband if requested to do so by the wife. In terms of the cost of sample surveys it is cheaper to designate the wife than the head as the respondent who is preferred. These data do not indicate that there is any advantage in preferring the husband if the objective of the project is to obtain accurate reports of savings accounts.

Table 60 shows the mean actual balance and mean reported balance for groups of respondents corresponding with those shown in Table 58. For all interviews, the mean actual balance was \$2,394. The investigators estimated a comparable magnitude, the mean reported balance, on the basis of the interviews. In this calculation the balance was entered as zero for those who failed to report the account. For those who did report a balance, the balance as reported was entered. For those who reported that they had an account but did not report the balance, the mean balance for those who did report a balance was assigned. The resulting estimate was \$1,753. This amount is 73 percent of the mean actual balance. In this respect the present study compares favorably with the first study where the same percentage

AN INVESTIGATION OF RESPONSE ERROR

Table 60. Mean Actual Balance and Mean Reported Balance for Each Category of Response Error, January 1, 1959, Account Balance

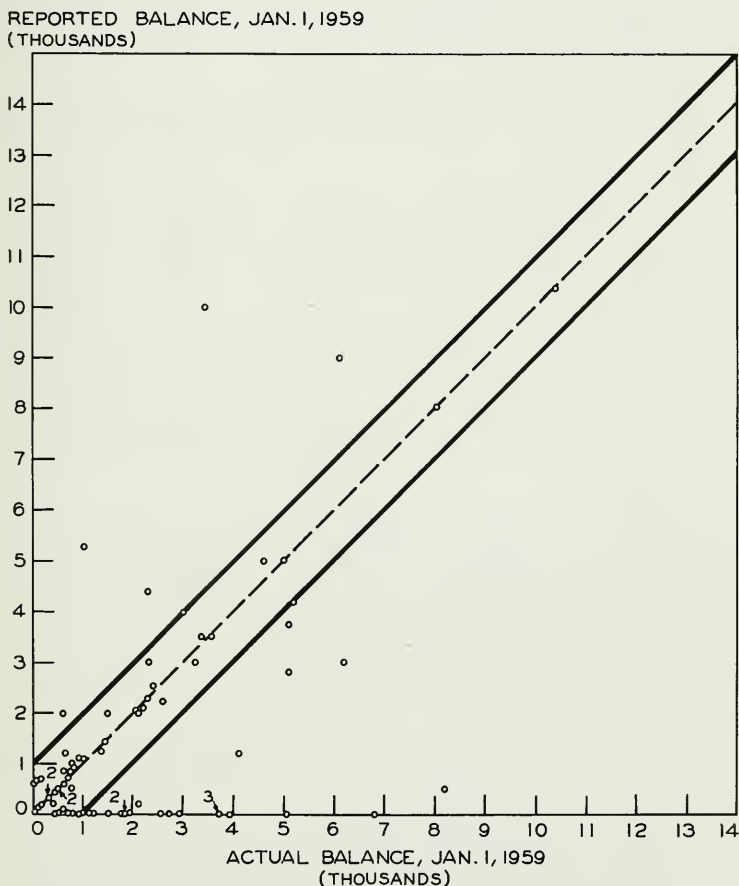
Response error for January 1, 1959, balance	Mean actual balance	Mean reported balance	Number
Failed to report account	\$2,168	-- ^a	22
Account owned by respondent or spouse or the two jointly	1,708	-- ^a	10
Account owned entirely or in part by someone other than respondent and spouse	2,552	-- ^a	12
Reported account, balance not ascertained	3,273	-- ^b	13
Reported account but refused to state balance	3,273	-- ^b	13
Reported balance for account	2,274	\$2,314	54
Underreported by \$1,000 or more	5,142	2,382	7
Overreported by \$1,000 or more	2,755	5,783	6
Accurate within \$1,000	1,714	1,794	41
All interviews ^c	2,394	1,753	89

^a Reported balance is zero.^b See explanatory comment for "All interviews" for assigned mean reported value of these accounts.^c Assigning same mean reported balance for those accounts for which reported balance was not ascertained as for those for which balance was reported.

was 55 percent. The relation between actual and reported balance is shown also in Chart 3.

Why were the results better in the present investigation? The difference is not large enough so that chance can be ruled out as an explanation. It is also possible, however, that the gain is a result of an improvement in techniques. There was one difference between the interviews of the first field study and of the present study: the use of the sealed envelope for reporting the financial data in the present study. This technique may have helped here as well as in the study of cash borrowers even though it received no special emphasis in the instructions to interviewers.

Chart 3. Reported and Actual Balances, January 1, 1959



Identification of the Selected Account

Table 61 shows the relation between the certainty of identification of the selected account and response error. It sometimes happened that the investigators had some doubt as to the match between the account or an account reported in the interview and the selected account. The criteria used for the selection of the designated account were as follows:

1. Ownership information should match (ideally), e.g.:

If R reports a joint account with a certain sex distribution of names and this agrees with the savings institution's data, it is a match unless R reports more than one such account.

If R reports a single name, and the savings institution reports a single owner, and the sex agrees, it is a match unless R reports more than one such account.

2. If there are two accounts which match on the basis of ownership, select the account which comes closest on the January 1, 1959, balance.
3. If the ownership data do not agree as to the second name, i.e., other than R, but R reports the January 1, 1959, balance within a small margin of error, accept the account.
 - a. Consider also, as a favorable indication, agreement as to the change and the January 1, 1958, balance.
 - b. If the internal evidence of financial transaction suggests that the change reported by the savings institution is reasonable, consider this a favorable indication for this account.

In 33 interviews the investigators selected an account in the interview and had no doubt in identifying the selected account as that about which information was known. In 24 interviews they selected such an account, but the match was not perfect and there was some doubt in their minds as to whether they identified the account correctly. As Table 61 shows, there was little difference in accuracy of report between these two groups. Among the cases where the analyst did not succeed in selecting an account, there were some in which the existence of an account was known from other indications in the interview. For example, in the earlier part of the interview the respondent might discuss the existence of a savings account in connection with the questions about banking. He might then refuse entirely to fill out the financial form. These interviews were coded as cases in which the respondent reported the account but refused to state the balance.

Table 61. Response Error in Relation to Certainty of Identification of the Selected Account, January 1, 1959, Balance^a
(Percentage distribution of interviews)

Response error for January 1, 1959, balance	Account selected		Account not selected		
	All inter-views	No doubt in identifying account	Some doubt in identifying account	No doubt that selected account not reported	Some doubt that selected account not reported
Failed to report account	25	3	-- b	65	76
Account owned by respondent or spouse or the two jointly	10	-- b	-- b	26	38
Account owned entirely or in part by someone other than respondent and spouse	15	3	-- b	39	38
Reported account, balance not ascertained					
Reported account but refused to state balance	15	6	4	35	25
Reported balance for account	60	91	96	-- b	-- b
Underreported by \$1,000 or more	10	18	13	-- b	-- b
Overreported by \$1,000 or more	5	3	13	-- b	-- b
Accurate within \$1,000	45	70	70	-- b	-- b
Total	100	100	100	100	101 ^c
Number of interviews	88 ^d	33	24	23	8

^a The account selected was the account for which the actual balance was known.

^b Less than 0.5 percent.

^c Does not add to 100 percent because of rounding.

^d Excludes interview in which the respondent failed to report that he had a new (post-January, 1959) account and none of his reported accounts was the selected account.

Another way of looking at the data is to ask, would the total reported savings accounts have been accepted on the basis of the evidence within the interview, or would the investigators have believed that the report was inaccurate or incomplete? The investigators judged, as shown in Table 62, that in 66 of the 88 interviews the total would have been accepted, while in 22 it would have been coded as "not ascertained." Of those cases in which the total would have been accepted, 57 percent reported the particular selected account within a margin of \$1,000.

Table 63 shows the proportion of respondents who gave information on savings accounts in the financial form. Some information was obtained in 74 of the 89 interviews. In 15 interviews no information about savings appeared on the financial form, but in 6 of the 15, the existence of the selected account was reported earlier in the interview. In 25 cases the respondent was the sole owner of the account; in 33 others the respondent was a joint owner with his spouse (Table 64). Thus, in 58 out of the 89 interviews the respondent or his spouse or both were the owners of the account under study. In the remaining 30 cases someone else was involved either as sole owner or joint owner.

Of the accounts which belonged to the respondent as sole owner, 68 percent were reported accurately within \$1,000. Of those which were owned jointly by the respondent and his spouse, 58 percent were reported accurately. Of the others, the proportion which were accurate was much smaller. The differences were largely due to failure to report at all accounts owned in whole or in part by persons other than the respondent. It is not unreasonable to speculate that respondents may feel free to tell about their own savings and that they may be encouraged in this by careful interviewing techniques; but that these same respondents may feel that accounts belonging to or involving other people are not their business to reveal.

At any rate, from Table 64 one may conclude that the best reports are obtained when the owner of a single account is interviewed about it, and the next best reports when the respondent and his spouse own the account. Much less accurate reports are obtained by interviewing the spouse of the account owner or by expecting a respondent to report accounts between himself and some person other than his spouse. Even when such accounts are reported, it is more likely that the balance will be refused or that the balance reported will be off by more than a thousand dollars.

Income

The next sequence of tables shows the relation between response error and socioeconomic characteristics of the respondent or of the spending unit. The relation between income and response error is shown in Table 65.

Table 62. Response Error for January 1, 1959, Balance in Relation to Whether the Total Reported Savings Account Holdings for January, 1959, Would Have Been Accepted on Basis of Interview Evidence Only
(Percentage distribution of interviews)

Response error for January 1, 1959, balance	All interviews	Total would have been accepted	Total would have been "not ascertained"
Failed to report account	26	23	37
Account owned by respondent or spouse or the two jointly	11	8	23
Account owned entirely or in part by someone other than respondent and spouse	15	15	14
Reported account, balance not ascertained			
Reported account but refused to state balance	15	2	54
Reported balance for account	59	75	9
Underreported by \$1,000 or more	10	14	-- ^b
Overreported by \$1,000 or more	3	4	-- ^b
Accurate within \$1,000	46	57	9
Total	100	100	100
Number of interviews	88 ^a	66	22

^a Excludes 1 interview for which this information was not coded.

^b Less than 0.5 percent.

Table 63. Response Error for January 1, 1959, Balance, in Relation to Whether Respondent Gave Information on Savings Accounts in The Financial Form
(Percentage distribution of interviews)

Response error for January 1, 1959, balance	All interviews	Some savings information given	No savings information given ^a
Failed to report account	26	17	60
Account owned by respondent or spouse or the two jointly	11	6	33
Account owned entirely or in part by someone other than respondent and spouse	15	11	27
Reported account, balance not ascertained			
Reported account but refused to state balance	15	8	40
Reported balance for account	59	64	-- ^b
Underreported by \$1,000 or more	10	11	-- ^b
Overreported by \$1,000 or more	4	5	-- ^b
Accurate within \$1,000	45	48	-- ^b
Total	100	99 ^c	100
Number of interviews	89	74	15 ^a

^a Includes 3 interviews in which the financial form was not returned, 2 interviews in which a blank form was returned, and 10 interviews in which a completed form was returned devoid of information in the savings account section.

^b Less than 0.5 percent.

^c Does not add to 100 percent because of rounding.

Table 64. Response Error for January 1, 1959, Balance in Relation to Ownership of Account
(Percentage distribution of interviews)

	All inter-views	Single accounts		Joint accounts	
		Respondent is account owner	Someone other than respondent is account owner	Respondent is joint owner with spouse	Joint account owned by other than respondent and spouse
Response error for January 1, 1959, balance					
Failed to report account	25	16	77	3	41
Account owned by respondent or spouse or the two jointly	11	16	31	3	6
Account owned entirely or in part by someone other than respondent and spouse	14	-- ^a	46	-- ^a	35
Reported account, balance not ascertained					
Reported account but refused to state balance	15	8	15	15	24
Reported balance for account	60	76	8	82	36
Underreported by \$1,000 or more	10	8	8	15	6
Overreported by \$1,000 or more	5	-- ^a	-- ^a	9	6
Accurate within \$1,000	45	68	-- ^a	58	24
Total	100	100	100	100	101 ^b
Number of interviews	89 ^c	25	13	33	17

^a Less than 0.5 percent.^b Does not add to 100 percent because of rounding.^c Excludes 1 interview in which relationship of respondent to account owner was not ascertainable.

Table 65. Response Error for January 1, 1959, Balance in Relation to Total Income of Family
(Percentage distribution of interviews)

Response error January 1, 1959, balance	All interviews	Income of family unit		
		Under \$5,000	\$5,000- \$9,999	\$10,000 and over
Failed to report account	23	27	24	16
Account owned by respondent or spouse or the two jointly	10	15	8	8
Account owned entirely or in part by someone other than respondent and spouse	13	12	16	8
Reported account, balance not ascertained				
Reported account but refused to state balance	8	8	10	-- ^a
Reported balance for account	69	65	66	84
Underreported by \$1,000 or more	12	15	8	15
Overreported by \$1,000 or more	5	8	5	-- ^a
Accurate within \$1,000	52	42	53	69
Total	100	100	100	100
Number of interviews	77 ^b	26	38	13

^a Less than 0.5 percent.

^b Excludes 12 interviews in which the income was not ascertained.

There seems to be a gradual increase in the accuracy of report as income increases. This finding is consistent with the results from the first field study and with the general tendency of higher socioeconomic status to be associated with accuracy of report of savings accounts. The higher-income people were less likely to fail to report an account, and they were more likely to be accurate within \$1,000 when they did report the account. Of those with incomes under \$5,000, 42 percent were accurate within \$1,000, while of those with incomes of \$10,000 or above, 69 percent were accurate. Taken by themselves the results of this study are not statistically reliable, but taken together with the results of the two earlier studies of savings accounts they show clearly that accuracy of report of savings accounts improves with income.

Education

There was some evidence in the first field experiment that respondents with high education were more likely to report balances for their savings accounts. The data in Table 66 point in the same direction. The proportion of respondents with a college education who reported a balance is 92 percent. Even with the small number of interviews the difference of about 29 percentage points between those with a college education and those with a high school education or less is in itself suggestive. The two studies combined point to the conclusion that education, like income, is positively associated with accuracy of report of savings accounts.

Occupation

One would expect this difference in education and income to be associated with a difference in occupation with white-collar workers reporting more accurately than blue-collar workers. Such a difference did appear in the first field study. The proportion of blue-collar workers who failed completely to report the account is somewhat higher in Table 67 than the proportion of white-collar workers. The difference is small, however, and consistent with the interpretation that the difference between blue-collar and white-collar status is not of major importance.

Age of Head

In the first field study of owners of large savings accounts little difference was found between respondents aged under 45 and those aged 45 and over. The results in Table 68 also suggest that the difference from one age group to the next is not large. If anything, younger people are more likely to report accurately. The differences

Table 66. Response Error for January 1, 1959, Balance in Relation to Education of Head of Family Unit (Percentage distribution of interviews)

Response error for January 1, 1959, balance	All inter-views	Education of head		
		Eighth grade or less	High school	College
Failed to report account	26	29	16	8
Account owned by respondent or spouse or the two jointly	11	13	8	-- ^a
Account owned entirely or in part by someone other than respondent and spouse	15	16	8	8
Reported account, balance not ascertained	15	7	23	-- ^a
Reported account but refused to state balance	59	64	63	92
Reported balance for account	10	5	8	25
Underreported by \$1, 000 or more	5	4	5	-- ^a
Overreported by \$1, 000 or more	44	55	50	67
Accurate within \$1, 000	100	100	102 ^b	100
Total	88 ^c	36	40	12

^a Less than 0.5 percent.

^b Does not add to 100 percent because of rounding.

^c Excludes 1 interview in which education of head was not ascertained.

Table 67. Response Error for January 1, 1959, Balance in Relation to Occupation of Head of Family
(Percentage distribution of interviews)

Response error for January 1, 1959, balance	All interviews	Occupation of head	
		White-collar worker	Blue-collar worker
Failed to report account	27	20	32
Account owned by respondent or spouse or the two jointly	13	9	16
Account owned entirely or in part by someone other than respondent and spouse	14	11	16
Reported account, balance not ascertained			
Reported account but refused to state balance	13	20	7
Reported balance for account	60	60	60
Underreported by \$1,000 or more	12	14	9
Overreported by \$1,000 or more	5	3	7
Accurate within \$1,000	43	43	44
Total	100	100	99 ^a
Number of interviews	78 ^b	35	43

^a Does not add to 100 percent because of rounding error.

^b Excludes 11 interviews: in 6 interviews, the head of the family was not in the labor force; in 5 interviews, the head's occupation was not ascertained.

Table 68. Response Error for January 1, 1959, Balance in Relation to Age of Head of Family
(Percentage distribution of interviews)

	All interviews	Age of head	
		Under 45	45 and over
Response error for January 1, 1959, balance			
Failed to report account	26	22	28
Account owned by respondent or spouse or the two jointly	11	11	12
Account owned entirely or in part by someone other than respondent and spouse	15	11	16
Reported account, balance not ascertained			
Reported account but refused to state balance	15	11	16
Reported balance for account	59	67	56
Underreported by \$1,000 or more	10	5	12
Overreported by \$1,000 or more	5	5	4
Accurate within \$1,000	44	57	40
Total	100	100	100
Number of interviews	87 ^a	19	68

^a Excludes 2 interviews in which age of head was not ascertained.

between age groups found in the study of cash borrowers were larger. It may be that the difference in that study is the result of differences between age groups in attitude toward use of instalment credit rather than any inherent difference in willingness to report financial information from one age group to the next.

Keeping Records of Money Spent

It was found in the first field study that those respondents who keep records of money spent tend to report their savings accounts more accurately. As shown in Table 69 this result was confirmed in the present investigation. There is a difference in accuracy in favor of those who report that they do keep records. As was previously discussed in Chapter VI, however, answers to this question may measure willingness to respond to questions about finances rather than sheer availability of the knowledge to the respondent.

Memory Error

In Table 70 accuracy of response is compared for two dates, January 1, 1959, and January 1, 1958. The distribution of error is based on a somewhat larger sample for the more recent date, since 12 interviews were with respondents whose accounts had been opened in the interviewing year. There is little or no difference in response error between the dates, to the extent that error is measured in Table 70. This result is similar to that obtained in the first field study. Problems of gradual forgetting as time goes by do not seem to be of importance in explaining the errors shown in Table 70.

Family Norms About Discussing Financial Matters

In this project the investigators tested a hypothesis, suggested by Dr. John R. P. French, Jr., that the observed differences in response error would be associated with differences in the freedom with which financial matters are discussed within the family. People who discuss financial matters more freely within the family might be expected to be more willing to discuss them with an interviewer. Three tables bear on this hypothesis, Tables 71 to 73.

In some interviews there was explicit evidence of concealment of financial information within the family. For example, one respondent was a widow living with her children. She told the interviewer that she did not know their income but would ask, and requested the interviewer to return another day. When the interviewer did so, the respondent reported that her children had refused to tell her their income. There were 12 interviews in which the investigators at least suspected the existence of such concealment. It is not sur-

Table 69. Response Error for January 1, 1959, Balance in Relation to Whether Respondent Keeps Records of Money Spent (Percentage distribution of interviews)

Response error for January 1, 1959, balance	All interviews	Records of money spent ^a	
		Keeps some records ^b	Keeps no records
Failed to report account	26	19	45
Account owned by respondent or spouse or the two jointly	11	8	18
Account owned entirely or in part by someone other than respondent and spouse	15	11	27
Reported account, balance not ascertained	15	16	14
Reported account but refused to state balance	59	65	41
Reported balance for account	9	9	9
Underreported by \$1,000 or more	5	6	--
Overreported by \$1,000 or more	45	50	32
Accurate within \$1,000	100	100	100
Total	86 ^c	64	22

^a The question was, "Some people keep complete records of all the money they spend while other people do not. Do you keep any records of what you have spent?"

^b Includes 11 respondents who said they kept "check stubs only"; of the 11, 5 reported accurately.

^c Excludes 2 respondents who kept records "for tax purposes only" and 1 respondent who kept records but the nature of the records was not ascertainable.

Table 70. Response Error in Reports of Balance at Two Points in Time, Based on Interviews Taken in Fall, 1959
(Percentage distribution of interviews)

Response error for January 1, 1959, balance	Date of balance	
	Balance January 1, 1959	Balance January 1, 1958
Failed to report account	26	28
Account owned by respondent or spouse or the two jointly	11	12
Account owned entirely or in part by someone other than respondent and spouse.	15	16
Reported account, balance not ascertained		
Reported account but refused to state balance	15	13
Reported balance for account	59	59
Underreported by \$1,000 or more	10	9
Overreported by \$1,000 or more	4	9
Accurate within \$1,000	45	41
Total	100	100
Number of interviews	89	77 ^a

^a Excludes 12 interviews where accounts were not open on January 1, 1958.

prising that in 7 of the 12 the respondent failed to report the known account. In 2 of the 12, the interviewers obtained accurate data.

Complete concealment of basic information among adults who live together in a family represents an extreme. Respondents were asked a question intended to be a more sensitive measure of differences in family norms, "How old were you before you knew how much the family income was?" As shown in Table 72, 34 of the 80 respondents (42 percent) said they never knew, 15 were told after they were 16 years of age, 22 were told between the ages of 12 and 15, and 9, before they were 12 years old. Only 11 percent could not or did not

Table 71. Response Error for January 1, 1959, Balance in Relation to Evidence of Concealment of Financial Information Among Members of Family
(Percentage of distribution of interviews)

	All inter-views	Evidence of concealment within family	
		Explicit evidence of concealment	Concealment suspected
Response error for January 1, 1959, balance			
Failed to report account	26	60	57
Account owned by respondent or spouse or the two jointly	11	20	43
Account owned entirely or in part by someone other than respondent and spouse	15	40	14
Reported account, balance not ascertained			
Reported account but refused to state balance	15	-- ^a	14
Reported balance for account	59	40	28
Underreported by \$1,000 or more	10	-- ^a	14
Overreported by \$1,000 or more	4	20	-- ^a
Accurate within \$1,000	45	20	14
Total	100	100	99 ^b
Number of interviews	89	5	7

^a Less than 0.5 percent.

^b Does not add to 100 percent because of rounding.

Table 72. Response Error for January 1, 1959, Balance in Relation to Age at which Respondent Knew Family Income
(Percentage distribution of interviews)

Response error for January 1, 1959, balance	All interviews	Age at which respondent knew family income ^a		
		Under 12	12-15	16 and over
Failed to report account	27	-- b	18	27
Account owned by respondent or spouse or the two jointly	12	-- b	9	7
Account owned entirely or in part by someone other than respondent and spouse	15	-- b	9	20
Reported account, balance not ascertained				
Reported account but refused to state balance	15	11	14	13
Reported balance for account	58	89	68	60
Underreported by \$1,000 or more	11	22	14	7
Overreported by \$1,000 or more	4	-- b	4	7
Accurate within \$1,000	43	67	50	46
Total	100	100	100	100
Number of interviews	80 ^c	9	22	15
				34

^a The question was, "How old were you before you knew how much the family income was?" The reference was to the respondent's childhood family.

^b Less than 0.5 percent.

^c Excludes 9 interviews in which no age was reported.

answer the question. The differences in accuracy of report are striking. Of those who knew the family income before they were 12, not one failed to report the account! Of those who say they were told between 12 and 15, 18 percent failed to report the account. Of those never told, 40 percent failed to report the account.

Another related measure was based on the following question: "In your opinion, how old do you think children should be before they know about the family income and savings?" The results are shown in Table 73. Again, there is clear evidence of a correlation between replies to the question and response error.

These results suggest strongly that concealment of financial information is deliberate and that it is associated with norms developed within the family relating to discussion of financial affairs. The implications of these results will be discussed at more length in the concluding section of this report.

Reporting of "Round Numbers"

While it is important to the survey research worker to understand the causes of response error, it may also be helpful to be able to tell which replies are more accurate. Table 74 shows the results of a test of the simple hypothesis that people who report round numbers are likely to be less accurate than those who report unrounded amounts. There is an obvious negative relation between rounding and absolute precision, but the hypothesis is that those who report round numbers are more likely to err by \$1,000 or more. The data support the hypothesis. Of those who report a figure rounded to three zeros or more, i.e., to the nearest thousand dollars, only half are correct within \$1,000. Of those who rounded to the nearest hundred, two-thirds are correct within \$1,000. But of those who report to the nearest \$10 or better, almost nine out of ten are correct within \$1,000.

'Interviewers' Ratings of Accuracy

Another way to estimate the accuracy of a report is to ask the interviewer to make a judgment. The results of such an attempt appear in Table 75. The data indicate that the interviewers did much better than chance. It is not surprising that they knew when the respondent failed entirely to report any financial information. They also seem to have had some success in detecting accurate reporting as opposed to underreporting or overreporting.

Error in Reports of Change

Table 76 shows the relation between actual and reported change for the 48 interviews in which a balance was reported for January

Table 73. Response Error for January 1, 1959, Balance in Relation to Age Which Children Should Be Before Knowing Family Income and Savings (Percentage distribution of interviews)

Response error for January 1, 1959, balance	All interviews	Age at which children should be told ^a		
		Under 12	12-15	16 and over
Failed to report account	25	12	29	20
Account owned by respondent or spouse or the two jointly	10	6	16	-- ^b
Account owned entirely or in part by someone other than respondent and spouse	15	6	13	20
Reported account, balance not ascertained				
Reported account but refused to state balance	14	11	16	7
Reported balance for account	60	78	55	73
Underreported by \$1,000 or more	9	11	9	7
Overreported by \$1,000 or more	5	6	3	13
Accurate within \$1,000	46	61	43	53
Total	99 ^c	101 ^c	100	100
Number of interviews	78 ^d	18	32	15

^a The question was, "In your opinion, how old do you think children should be before they know about the family income and savings?"

^b Less than 0.5 percent.

^c Does not add to 100 percent because of rounding.

^d Excludes 11 interviews in which no age was given in response to the question.

Table 74. Response Error for January 1, 1959, Balance in Relation to Whether Respondent Reported a Round or an Exact Figure for Balance^a (Percentage distribution of interviews)

Response error for January 1, 1959, balance	All interviews	Figure reported by respondent				Exact
		Figure rounded to 3 zeros or more	Figure rounded to 2 zeros	Figure rounded to 1 zero		
Underreported by \$1,000 or more	17	30	17	12	12	12
Overreported by \$1,000 or more	8	20	12	-- ^b	-- ^b	-- ^b
Accurate within \$1,000	75	50	72	88	88	88
Total	100	100	101 ^c	100	100	100
Number of interviews	53 ^d	10	18	8		17

^a If account was not open on January 1, 1959, then July 1, 1959, was used as check-date.

^b Less than 0.5 percent.

^c Does not add to 100 percent because of rounding.

^d Excludes 36 interviews in which the account or its balance was not reported by the respondent.

Table 75. Response Error for January 1, 1959, Balance in Relation to Interviewers' Ratings of Accuracy of Respondents' Reports of Bank Accounts (Percentage distribution of interviews)

	All inter-views	Interviewers' ratings of respondent accuracy				Not ascertainable by interviewer
		Very accurate	Reasonably accurate	Somewhat inaccurate	Very inaccurate	
Response error for January 1, 1959, balance						
Failed to report account	26	9	23	40	57	41
Account owned by respondent or spouse or the two jointly	11	6	9	30	14	12
Account owned entirely or in part by someone other than respondent and spouse	15	3	14	10	43	29
Reported account, balance not ascertained						
Reported account but refused to state balance	15	3	9	10	43	35
Reported balance for account	59	88	68	50	-- ^a	24
Underreported by \$1,000 or more	10	9	18	20	-- ^a	-- ^a
Overreported by \$1,000 or more	4	-- ^a	18	-- ^a	-- ^a	-- ^a
Accurate within \$1,000	45	79	32	30	-- ^a	24
Total	100	100	100	100	100	100
Number of interviews	89	33	22	10	7	17

^a Less than 0.5 percent.

1, 1958, and January 1, 1959. There were 31 interviews for which there was an actual increase of \$100 or more. Of these, 10 were reported correctly; that is, 10 were reported as increases within the correct bracket. An additional 11 were correctly reported as increases, but in the wrong interval; 7 were erroneously reported with no change, and 3, with a decrease. Of the 9 actual decreases, 4 were correctly reported.

Conclusions

To summarize, the following variables seem to be associated with accuracy of response in reports of savings accounts on the basis of data reported in this chapter:

- Whether the account is the property of the respondent only, or of the respondent and his spouse
- Income of the family
- Education of the head of the family
- Whether records of family expenditures are kept
- Whether the family norms tend to concealment or free discussion of financial matters
- Whether the respondent reports exact figures without rounding
- Interviewers' ratings of accuracy

The following do not seem to be associated with error in reports of bank accounts:

- Whether the respondent is to be paid
- Whether the preferred respondent is the head or his wife
- Whether the date about which data are sought is 6 months or 18 months prior to the interview

The evidence is doubtful concerning the following:

- Actual size of balance
- Age of head
- Occupation of head

VIII. THE MAIL REINTERVIEWS

Purposes of the Study and Description of Procedures

It has already been mentioned that when the investigators recovered from the initial shock of the results from the interviews taken in the fall of 1958, they attempted to develop a more systematic theory of response error than had been available up to that time. A statement of the current state of this theory in the light of the results of the investigation will appear in Chapter IX. Particular lines of reasoning which led to the experimental manipulations in the study of cash borrowers and the study of owners of savings accounts in the third field experiment (Chapter VII) have been described in connection with those studies.

The experimental manipulations, however, were designed essentially to test particular techniques of investigation rather than to test any theory. It is true that the manipulations were based on particular lines of reasoning, and the failure or success of a technique might lead to a re-evaluation of the reasoning. But the investigators felt that more work might be done to generalize this reasoning and then to check certain aspects of the theory of response error.

They were interested in particular in forces growing out of the interpersonal relations between the interviewer and the respondent. Perhaps the most systematic attempt which has been made to develop a theory of interviewing is that reported by R. Kahn and C. Cannell in The Dynamics of Interviewing.⁴ These authors placed particular emphasis on the importance of these forces. It was proposed, therefore, to attempt to measure them and to investigate the relation between them and response error.

Measurement required a separate process of data collection. The interviewer could not ask the respondent, "How do you react to me?" The simplest method of data collection available was a mail reinterview, and such a reinterview was carried out with the cash borrowers in the second field study and with the owners of savings accounts in the third field study. In these reinterviews use could be made of questions already asked in mail follow-ups in other studies. The possibilities of comparison between the field experiments and regular surveys were attractive.

The Questionnaire

The forces which it was proposed to measure and the related questions were the following:

A. Forces arising out of the interpersonal relation between the respondent and the interviewer.

1. General attitude toward the interview as a whole.

Question: How would you feel about being interviewed again?

⁴ New York: Wiley, 1957.

2. Attitude toward the interviewer.

Question: How did you like the interviewer as a person?

3. Attitudes toward the content of the interview.

Questions: How interesting did you find the interview?

How well did the interviewer succeed in making clear to you what the study was about?

- B. Forces arising out of the relation of the respondent to the project and sponsors and to the University.

Questions: How do you feel about whether surveys like this one are a good idea?

During the interview did you have any doubts as to whether you should be giving the information?

- C. Forces arising out of other attitudes of the respondent.

Questions: Were there any questions which you thought were too personal or prying?

Do you think people will give us accurate information about their finances or not?

It is doubtful whether the questions asked were adequate to separate the different categories of forces which the investigators had in mind. Much more information would be needed, for example, to make statements about attitudes of respondents to the University of Michigan or to social research. At minimum it was hoped at least to treat all the questions as aspects of "good rapport" between respondent and interviewer. The relation between rapport and response error could then be examined.

Error Non-Response

The first concern of anyone using a mail questionnaire is the response rate. In this project it was hoped that the mail questionnaire would be returned because of the recent personal interview. The results were encouraging. Of those interviewed in the study of cash borrowers, 59 percent returned the questionnaire (Table 77). Mailing out of the questionnaires was more prompt for the savings account study, and the results were even better. Of the latter, 80 percent were returned. It may be that for many of the respondents the fact that they had been paid contributed to their willingness to respond. These results compare favorably with a return of 75 percent in a comparable reinterview of respondents in a study of community integration and 33 percent on a national Survey of Consumer Finances.

There seems to be no relation between response error and returning the mail questionnaire, at least for cash borrowers (Table 78).

Table 77. Response Disposition to a One-Page Mail
Questionnaire for Several Studies
(Percentage distribution of interviews)

Response disposition to mail questionnaire	Cash borrowers (second field study)	Savings account owners (third field study)	Survey of Consumer Finances, nationwide	Community integration study
Mail questionnaire returned	59 ^a	80 ^b	33 ^c	75
Mail questionnaire not returned	41	20	67	25
Total	100	100	100	100
Number of personal interviews	101	89	1,860	694

^a Questionnaires were sent out a week to a month after the interview.

^b Questionnaires were sent out a week to two weeks after the interview.

^c This figure is low in comparison with the other surveys because the questionnaires were sent out over a month after the interview.

Table 78. Response Error for Cash Loans Study in Relation to
Whether Respondent Returned Mail Questionnaire
(Percentage distribution of interviews)

Response error for cash loans study	All interviews	Respondent returned mail questionnaire	Respondent did not return mail questionnaire
Reported known loan	37	35	39
Reported other loans only	45	50	39
Reported no loans	11	8	15
Had no known loan at that time	7	7	7
Total	100	100	100
Number of respondents	101	60	41

Response ErrorComparisons Among Studies in Rapport

From time to time the suggestion has been made that the response error has been unusually high in the field experiments because of the special conditions necessarily surrounding such experiments. Interviewers may be nervous, especially about new techniques. They may fear their work will be checked and found wanting. This proposal was advanced especially in interpreting the early study reported in Chapter II. If this suggestion is correct, one would expect to find that respondents in a field experiment are left with negative feelings about the interview. The data in Table 79 suggest that in the two field experiments under study rapport was about as good as in other projects. This table shows the answers to four questions asked in follow-up studies after each of four surveys. The proportion of favorable replies is about the same from one survey to the next.

There were two differences among the surveys which should be mentioned, however. Respondents were more likely to report the field experiments as interesting than the Survey of Consumer Finances. This difference no doubt reflects the emphasis in the Survey on straight factual information. It is also of interest that a large proportion of the owners of savings accounts thought the questions were too personal or prying (Table 79). The proportion of cash borrowers who took this position was no different from that in the other inquiries. In fact the questions asked of the owners of savings accounts were detailed, but no more detailed than in the Survey of Consumer Finances. The difference in response, therefore, is probably due to a difference in the characteristics of the owners of savings accounts. These data point in the same direction as the difference in refusal rates and the general comments of the interviewers after the study: these people are harder to interview about their financial affairs.

In Table 80 comparisons are made between the cash borrowers and owners of savings accounts for the remaining four questions. Comparable data from other studies are not available.

The responses of the two groups are very similar. One difference, however, does appear. The owners of savings accounts seem to be less likely than cash borrowers to think that most people will reveal accurate information about their finances. The difference is near but does not attain significance from a statistical point of view.

Relation of Rapport to Response Error

Table 81 shows the relation between each of the eight questions

Table 79. Percentage Distributions for Responses to Four Questions on the Mail Questionnaire for Several Studies

Responses	Cash borrowers (second field study)	Savings account owners (third field study)	Survey of Consumer Finances, nationwide	Community integration study
How well did the interviewer succeed in making clear to you what the study was about?				
Favorable	80	85	83	71
Very clear	80	85	83	71
Unfavorable	20	15	17	29
Fairly clear	18	14	14	25
Not so clear	2	-- ^a	1	2
Not clear at all	-- ^a	1	2	1
Did not answer	-- ^a	-- ^a	-- ^a	1
How interesting did you find the interview?				
Favorable	58	69	49	63
Very interesting	58	69	49	63
Unfavorable	42	31	51	37
Fairly interesting	35	25	42	29
Not too interesting	5	6	6	5
Not interesting at all	2	-- ^a	3	1
Did not answer	-- ^a	-- ^a	-- ^a	2
How would you feel about being interviewed again?				
Favorable	77	77	78	72
Would like to be interviewed again	15	14	14	20
Wouldn't mind being interviewed again	62	63	64	52
Unfavorable	23	22 ^b	22	27 ^b
Depends	3	-- ^a	-- ^a	-- ^a
Would rather not be interviewed again	12	16	14	20
Wouldn't want to be interviewed again	8	6	8	7
Did not answer	-- ^a	1	-- ^a	1
Were there any questions which you thought were too personal or prying?				
No (favorable)	78	61	75	82
Yes (unfavorable)	20	39	24	15
Did not answer	2	-- ^a	1	3
Number of respondents	60	71	621	521

^a Less than 0.5 percent.

^b Detail will not add to total because of rounding.

Table 80. Percentage Distributions for Responses to the Other Four Questions on the Mail Questionnaire for Two Studies

Responses	Cash borrowers (second field study)	Savings account owners (third field study)
How did you like the interviewer as a person?		
Favorable	85	83
Very much	85	83
Unfavorable	15	17
Fairly well	15	17
Not too much	-- ^a	-- ^a
Not at all	-- ^a	-- ^a
How did you feel about whether surveys such as this one are a good idea?		
Favorable	85	89
A very good idea	37	30
A good idea	48	59
Unfavorable	10	7
Depends	2	-- ^a
A poor idea	5	7
A very poor idea	3	-- ^a
Did not answer	5	4
During the interview did you have any doubts as to whether you should be giving the information?		
Favorable	45	42
Never had any doubt	45	42
Unfavorable	52	55
Had minor doubts	42	44
Had fairly serious doubts	7	10
Had very serious doubts	3	1
Did not answer	3	3
Do you think people will give us accurate information about their finances or not?		
Favorable	62	48
Everybody will	-- ^a	3
Most people will	62	45
Unfavorable	38	51
Some people will	35	37
Hardly anybody will	3	14
Did not answer	-- ^a	1
Number of respondents	60	71

^a Less than 0.5 percent.

Table 81. Response Error for Cash Loans in Relation to Other Factors
(Percentage distribution of interviews)

Other factors	Reported known loan	Reported other loans only	Reported no loans	Had no known loan at that time	Total	Number of respondents
How well did the interviewer succeed in making clear to you what the study was about?						
Favorable	40	50	8	2	100	48
Unfavorable	17	50	8	25	100	12
How interesting did you find the interview?						
Favorable	49	40	9	3	101 ^a	35
Unfavorable	16	64	8	12	100	25
How would you feel about being interviewed again?						
Favorable	44	48	4	4	100	46
Unfavorable	7	58	21	14	100	14
How did you like the interviewer as a person?						
Favorable	39	47	8	6	100	51
Unfavorable	11	67	11	11	100	9
How do you feel about whether surveys like this are a good idea? ^b						
Favorable	37	49	10	4	100	51
Unfavorable	17	50	-- ^c	33	100	6
Were there any questions which you thought were too personal or prying? ^d						
Favorable	43	45	9	4	101 ^a	47
Unfavorable	8	67	8	17	100	12
During the interview did you have any doubts as to whether you should be giving the information? ^e						
Favorable	44	44	7	4	99 ^a	27
Unfavorable	25	56	9	9	99 ^a	32
Do you think people will give us accurate information about their finances or not?						
Favorable	46	43	8	3	100	37
Unfavorable	17	61	9	13	100	23
All mail reinterviews	35	50	8	7	100	60

^a Does not add to 100 percent because of rounding.
^b Excludes 3 respondents who did not answer this question. Of the 3, 1 reported the known loan and 2 other loans only.
^c Less than 0.5 percent.
^d Excludes 1 respondent who did not answer this question; he reported other loans only.
^e Excludes 1 respondent who did not answer the question; he reported the known loan.

in the mail survey and response error. The tables for the cash borrowers are followed by those for the owners of savings accounts (Tables 82 to 89). If the whole set of sixteen relationships is regarded as a test of one general hypothesis -- that good rapport leads to accurate data -- then that hypothesis must be regarded as confirmed. The relationships are consistently in the direction that favorable answers to the questions on the mail reinterview are associated with accurate responses. It is not easy to compare the closeness of the relationship between the two studies since there is a single measure of success for the cash borrowers, reporting the known loan, while degrees of success are more important for the savings account owners. The data do give the impression, however, that the relation between rapport and accuracy is closer for the cash borrowers. Further investigation would be required to confirm this impression.

Which dimensions of rapport, or which of the forces measured, are most important? Again, more elaborate analysis would be required for a precise answer. As far as the study of cash loans is concerned, inspection of the tables suggests that there is not much choice. Considered in isolation, each question seems important. The similarity of results suggests that the questions may in fact be measuring the same thing. The investigators have not conducted a special study of this topic, but they have gone far enough to discover that respondents who give favorable answers to one question do tend to give favorable answers to other questions.

Study of the tables for owners of savings accounts shows little relation between rapport and one type of error: failure to report an account wholly or partly owned by someone other than the respondent and his spouse. This result is consistent with the interpretation that, psychologically, these accounts typically do not belong to the respondent and that, in terms of understanding his behavior, one should not take them into account.

The most explicit kind of refusal, on the other hand, is to report the account but not the balance in it. One would predict that those who give favorable replies should be less likely to respond in this way. This prediction is supported by the results in all eight of the relevant tables.

Among those who do report a balance in the selected account one would expect that those who respond favorably to the questions in the mail reinterview should be more likely to report accurately within \$1,000. The data do not seem to bear out this prediction. People with poor rapport who do report a balance seem to respond as accurately as those with good rapport. This result suggests that rapport is not the whole story; it emphasizes that other variables also must be taken into consideration to explain differences in accuracy of response.

Table 82. Response Error for January, 1959, Balance in Savings Accounts in Relation to Whether Interviewer Succeeded in Making Clear What Study was About
(Percentage distribution of interviews)

Response error in January, 1959, balance	All mail reinterviews	Success of interviewer in making clear what study was about	
		Favorable	Unfavorable
Failed to report account	25	25	27
Account owned by respondent or spouse or the two jointly	10	10	9
Account owned entirely or in part by someone other than respondent or spouse	15	15	18
Reported account, balance not ascertained			
Reported account but refused to state balance	11	10	18
Reported balance for account	64	65	55
Underreported by \$1,000 or more	10	11	-- ^a
Overreported by \$1,000 or more	3	3	-- ^a
Accurate within \$1,000	51	50	55
Total	100	100 ^b	100
Number of interviews	71	60	11

^a Less than 0.5 percent.

^b Detail will not add to total because of rounding.

Table 83. Response Error for January, 1959, Balance in Savings Accounts
In Relation to Whether Interview was Interesting
(Percentage distribution of interviews)

Response error in January, 1959, balance	All mail reinterviews	Interview found interesting	
		Favorable	Unfavorable
Failed to report account	25	26	23
Account owned by respondent or spouse or the two jointly	10	10	9
Account owned entirely or in part by someone other than respondent and spouse	15	16	14
Reported account, balance not ascertained			
Reported account but refused to state balance	11	6	23
Reported balance for account	64	67	55
Underreported by \$1,000 or more	10	12	5
Overreported by \$1,000 or more	3	4	-- ^a
Accurate within \$1,000	51	51	50
Total	100	99 ^b	101 ^b
Number of interviews	71	49	22

^a Less than 0.5 percent.

^b Does not add to 100 percent because of rounding.

Table 84. Response Error for January, 1959, Balance in Savings Accounts in Relation to How the Respondent Would Feel About Being Interviewed Again
(Percentage distribution of interviews)

Response error in January, 1959, balance	All mail reinterviews	Attitude toward being interviewed again	
		Favorable	Unfavorable
Failed to report account	25	26	25
Account owned by respondent or spouse or the two jointly	10	11	6
Account owned entirely or in part by someone other than respondent and spouse	15	15	19
Reported account, balance not ascertained			
Reported account but refused to state balance	11	7	25
Reported balance for account	64	68	50
Underreported by \$1,000 or more	10	11	6
Overreported by \$1,000 or more	3	4	-- ^a
Accurate within \$1,000	51	53	44
Total	100	101 ^b	100
Number of interviews	71	55	16

^a Less than 0.5 percent.

^b Does not add to 100 percent because of rounding.

Table 85. Response Error for January, 1959, Balance in Savings Accounts in Relation to How Well the Respondent Liked the Interviewer as a Person
(Percentage distribution of interviews)

Response error in January, 1959, balance	All mail reinterviews	Attitude toward interviewer as a person	
		Favorable	Unfavorable
Failed to report account	25	27	16
Account owned by respondent or spouse or the two jointly	10	10	8
Account owned entirely or in part by someone other than respondent and spouse	15	17	8
Reported account, balance not ascertained			
Reported account but refused to state balance	11	10	17
Reported balance for account	64	63	66
Underreported by \$1,000 or more	10	12	-- ^a
Overreported by \$1,000 or more	3	2	8
Accurate within \$1,000	51	49	58
Total	100	100	99 ^b
Number of interviews	71	59	12

^a Less than 0.5 percent.

^b Does not add to 100 percent because of rounding.

Table 86. Response Error for January, 1959, Balance in Savings Accounts in Relation to Whether Surveys Like This One Are a Good Idea
(Percentage distribution of interviews)

Response error in January, 1959, balance	All mail reinterviews	Feeling about whether surveys like this one are a good idea	
		Favorable	Unfavorable
Failed to report account	25	25	25
Account owned by respondent or spouse or the two jointly	10	11	-- ^a
Account owned entirely or in part by someone other than respondent and spouse	15	14	25
Reported account, balance not ascertained			
Reported account but refused to state balance	11	8	38
Reported balance for account	64	66	38
Underreported by \$1,000 or more	10	11	-- ^a
Overreported by \$1,000 or more	3	3	-- ^a
Accurate within \$1,000	51	52	38
Total	100	99 ^b	101 ^b
Number of interviews	71	63	8

^a Less than 0.5 percent.

^b Detail will not add to total because of rounding.

Table 87. Response Error for January, 1959, Balance in Savings Accounts in Relation to Whether There Were any Questions That Were Too Personal or Prying (Percentage distribution of interviews)

Response error in January, 1959, balance	All mail reinterviews	Attitude toward whether questions were too personal or prying	
		Favorable	Unfavorable
Failed to report account	25	28	21
Account owned by respondent or spouse or the two jointly	10	12	7
Account owned entirely or in part by someone other than respondent and spouse	15	16	14
Reported account, balance not ascertained			
Reported account but refused to state balance	11	5	21
Reported balance for account	64	67	57
Underreported by \$1,000 or more	10	2	21
Overreported by \$1,000 or more	3	2	4
Accurate within \$1,000	51	63	32
Total	100	100	99 ^a
Number of interviews	71	43	28

^a Does not add to 100 percent because of rounding.

Table 88. Response Error for January, 1959, Balance in Savings Accounts in Relation to Whether the Respondent Had Any Doubts About Giving Information
(Percentage distribution of interviews)

Response error in January, 1959, balance	All mail reinterviews	Feeling of doubts about giving information	
		Favorable	Unfavorable
Failed to report account	25	27	25
Account owned by respondent or spouse or the two jointly	10	10	10
Account owned entirely or in part by someone other than respondent and spouse	15	17	15
Reported account, balance not ascertained	11	3	17
Reported account but refused to state balance	64	70	58
Reported balance for account	10	7	12
Underreported by \$1,000 or more	3	3	2
Overreported by \$1,000 or more	51	60	44
Accurate within \$1,000			
Total	100	100	100
Number of interviews	71	30	41

Table 89. Response Error for January, 1959, Balance in Savings Accounts in Relation to Whether People Will Give Us Accurate Information About Their Finances
(Percentage distribution of interviews)

Response error in January, 1959, balance	All mail reinterviews	Feeling about whether people will give accurate information about their finances or not	
		Favorable	Unfavorable
Failed to report account	25	24	27
Account owned by respondent or spouse or the two jointly	10	9	11
Account owned entirely or in part by someone other than respondent and spouse	15	15	16
Reported account, balance not ascertained			
Reported account but refused to state balance	11	9	14
Reported balance for account	64	68	60
Underreported by \$1,000 or more	10	6	14
Overreported by \$1,000 or more	3	3	3
Accurate within \$1,000	51	59	43
Total	100	101 ^a	101 ^a
Number of interviews	71	34	37

^a Does not add to 100 percent because of rounding.

The Mail Reinterview and the Experimental Manipulations

It was found in Chapter VI that the C interview technique tended to produce more accurate responses than the A or B techniques. Were the differences in techniques reflected in the mail reinterview? The data relevant to this question are shown in Table 90. In only one respect are there any differences among the techniques. Respondents in the C interviews were the most likely to give a favorable reply to the question, "During the interview did you have any doubts as to whether you should be giving the information?" The C technique was not particularly successful in convincing respondents that the survey was a good idea or in making them feel that they had a clear idea of what the study was about. The use of "props" in the technique, the special explanation of the purposes of the project, and so forth, do not seem to have impressed people with the usefulness of the research. Where the technique does seem to have been a success was in the increased confidentiality and anonymity associated with the sealed envelope. The use of the "props" may also have contributed to the respondent's confidence of his anonymity. It will be recalled that the A respondents were given the opposite treatment; they were asked for by name. There seems to have been, as a consequence, a considerable difference between the A and C groups in hesitancy about revealing information.

Summary Tables

Table 91 summarizes the relation between rapport and response error for the cash borrowers. The score on favorableness was constructed by adding replies to the eight questions. Of those with the lowest score, only 16 percent responded accurately, compared with 45 percent of those in the middle range and 53 percent of those who scored high.

Table 92 shows the relation between two sub-groups of the questions. It illustrates the point that the answers to the different questions are correlated.

Conclusions

The evidence presented confirms the hypothesis that there is a relationship between high rapport and accurate response. It also indicates, however, that rapport is not the whole story. The implications of these findings will be discussed at more length in Chapter IX.

Table 90. Experimental Manipulations in The Cash Loan Study in Relation to the Favorableness of Responses to Questions on the Mail Reinterview (Percentage distribution of interviews)

Question	All favorable responses	Experimental manipulation (Interview treatment) ^a		
		A	B	C
How well did the interviewer succeed in making clear to you what the study was about?	80	75	88	79
How interesting did you find the interview?	58	58	59	58
How would you feel about being interviewed again?	77	75	76	79
How did you like the interviewer as a person?	85	88	77	90
How do you feel about whether surveys like this one are a good idea?	85	79	94	84
Were there any questions which you thought were too personal or prying?	78	79	82	74
During the interview did you have any doubts as to whether you should be giving the information?	45	33	41	63
Do you think people will give us accurate information about their finances or not?	62	62	65	58
Number of mail questionnaires returned	60	24	17	19

^a A. Interviewer checked before leaving that she had right respondent by name.

B. No use was made of respondent's name.

C. No use was made of respondent's name; sealed envelope technique.

Table 91. Response Error for Cash Loans Study in Relation to Over-all Score on Favorableness from Mail Questionnaire Items
(Percentage distribution of interviews)

Response error for cash loans study	All mail reinterviews ^a	Over-all score on favorableness for eight mail questionnaire items ^b		
		Low 0-5	Middle 6-7	High 8
Reported known loan	37	16	45	53
Reported other loans only	54	79	36	47
Reported no loans	9	5	18	-- ^c
Total	100	100	99 ^d	100
Number of respondents	56	19	22	15

^a Excludes 4 respondents who returned the mail questionnaire but had paid up their loans before the interview.

^b This over-all score on favorableness is the sum of the individual's score on the favorableness toward the interviewing situation scale (5 questions) plus his score on the favorableness toward accuracy scale (3 questions).

^c Less than 0.5 percent.

^d Does not add to 100 percent because of rounding.

Table 92. Score on Favorableness Toward the Interviewing Situation in Relation to the Score on Favorableness Toward Accuracy
(Percentage distribution of interviews)

Score on favorableness toward accuracy ^a	All mail reinterviews	Score on favorableness toward the interviewing situation ^b		
		Low 0-3	Middle 4	High 5
Low: 0-1	33	60	31	15
Middle: 2	32	30	38	30
High: 3	35	10	31	55
Total	100	100	100	100
Number of mail reinterviews	60	20	13	27

^a Score on favorableness toward accuracy is an additive score based on the number of favorable replies to three questions about whether questions were too personal or prying, whether people will give us accurate information about their finances, and whether the respondent had any doubts about giving the information.

^b Score on favorableness toward the interviewing situation is an additive score based on the number of favorable replies to five questions about how well the interviewer succeeded in making clear what the study was about, how interesting the interview was, how the respondent would feel about being interviewed again, whether he liked the interviewer as a person, and whether surveys like this one are a good idea.

The results also indicate that responses on a mail questionnaire are related to certain types of response error. It may be possible to utilize this information in analysis in future studies. If it is known which of a set of responses are more likely to be accurate, more reliance can be placed on the better data. In this way it may be possible to make some progress toward the goal of reducing the risk of drawing mistaken conclusions from data subject to response error.

PART FOUR

CONCLUSIONS

IX. TOWARD A THEORY OF RESPONSE ERROR

It is the objective of this chapter to organize the mass of material collected during this investigation of response error in such a way that maximal use can be made of it. To this end, Chapter IX has been arranged in four sections. The first section summarizes the main findings, organized in terms of the major independent variables. The second offers an evaluation of the specific techniques of investigation which were used in the studies. In the third section, a tentative and incomplete theory of response error is suggested. The development of a fairly rigorous theory of response error is considered by the authors the most promising approach to the problem of the understanding, control, and minimization of response error. The discussion in this section represents an attempt to further the development of such a theory. The fourth section concludes this report by presenting some general comments on what the investigators feel they have learned about the conduct of research on response error.

Summary of Results

As this investigation of response error has progressed, a large quantity of information has been accumulated. There have been described in this report nine separate but related data collection operations: (1) the preliminary study of savings accounts, (2) the exploratory interviews on car debt in Michigan, (3) the interviews on car debt in Chicago, (4) the special check using data from the 1956 Survey of Consumer Finances, (5) the interviews with holders of savings accounts in the first field experiment in the fall of 1958, (6) the reinterviews with the same individuals in 1959, (7) the study of cash loans in the second field experiment, (8) the study of owners of savings accounts in the third field experiment, and (9) the mail reinterviews.

The present summary contains no new material. It is divided into four subsections. Three of these units summarize the relation between response error and each of the following: characteristics of the financial variable under study, socioeconomic characteristics of the unit studied, and psychological variables and related behavioral variables. A final sub-section discusses the validity of interviewers' ratings.

Characteristics of the Financial Variables

Primary Versus Secondary Loans on Cars

The respondents in Chicago reported primary loans more adequately than secondary loans. Of 91 respondents, all reported primary

loans on their cars. Of 39 also known to have secondary loans, 17 failed to report them (Table 9).

Size of Actual Balance

In the study of savings accounts in the first field experiment, the larger the actual balance the less accurate the report. Of 39 respondents with a balance under \$2,000, 71 percent reported a balance, including 56 percent who were within \$1,000. Of 30 respondents with a balance of \$5,000 or more, only 37 percent reported a balance and only 10 percent were within \$1,000 (Table 23).

Socioeconomic Variables

Income

In the preliminary savings study there was little difference in accuracy between those with incomes over and under \$5,000. If anything, the higher-income people reported their savings balances more accurately (Table 5).

In the first field experiment people in the higher income groups reported savings accounts more accurately. In particular they were more likely to report the existence of an account and to report a balance, but the balance was not always accurate (Table 26).

In the third field experiment high-income people again reported savings accounts more accurately (Table 65). Thus, people in the upper-income group tended to report savings accounts more accurately but cash loans less accurately.

Education

In the first field experiment respondents with higher education reported savings accounts more accurately. Of those with a college education, 76 percent reported the existence of the selected account and reported a balance in the account, while of those with an eighth grade education or less only 55 percent reported a balance for the selected account (Table 27).

In the study of cash loans 47 percent of those with a college education reported the known loan, compared with 41 percent of those with a high school education and 33 percent of those with an eighth grade education or less (Table 45).

In the study of savings accounts 92 percent of those with a college education reported the existence of the known account and reported a balance for this account. Of those with less than a college education about 63 or 64 percent reported with that degree of accuracy (Table 66).

In all three studies, then, those with a higher education tended to report more accurately.

Occupation of Head of Family

In the first field experiment respondents from families headed by a white-collar worker reported savings more accurately than those from blue-collar families (Table 28). This difference, of course, is consistent with the difference between education groups. Of the respondents from white-collar families 80 percent reported a balance for the known account, compared with 54 percent for the respondents from blue-collar families.

In the study of cash borrowers this difference between occupation groups practically disappears (Table 46). Of the respondents from white-collar families 40 percent reported the known loan compared with 40 percent from blue-collar families. There is some difference in the proportion reporting other loans. Of the white-collar respondents 53 percent reported such loans compared with only 45 percent of the blue-collar respondents. It is not known, however, whether there is an actual difference in the frequency of other loans.

In the third field experiment once again there is very little difference between occupation groups. There is no difference at all in the proportion who report a balance for the savings account. The white-collar workers were somewhat more likely to report the account but not the balance and, conversely, less likely to fail to report the account entirely than were the blue-collar workers (Table 67).

It is surprising to find such small differences between white-collar and blue-collar workers in view of the importance of differences in education. The data suggest that the correlations between education and accurate response are of more basic importance than any relationships which appear with occupation.

Age of Head of Family

In the preliminary study of savings accounts it turned out that there was a relationship between being over 45 years of age and making an error of \$200 or more in reporting the balance. This relationship may be due in part to the fact that balances tend to be higher for people over 45, so that \$200 is a smaller fraction of the balance (Table 5).

In the first field experiment there was little evidence of an association between age and accuracy of response. If anything, those aged 65 and over were slightly less likely to report accurately, through the difference was well within the margin of sampling fluctuation (Table 29).

In the study of cash loans, however, there is again some indication

of a difference between age groups. Of those aged 45 and over, 31 percent reported the known loan compared with 51 percent of those aged under 45 (Table 47). This difference is just under the margin of statistical significance.

In the third field experiment there was a small difference in accuracy of response between the age groups. Of those aged 45 and over fewer reported accurately than of those aged under 45. The difference, however, was well within the margin of sampling error.

It seems reasonable to conclude that age is not associated powerfully with accuracy of response with respect to reports of ownership of bank accounts. The data do suggest that there is a relation between age and accuracy of report of cash loans. This difference may be the result of differences between age groups in attitudes toward installment credit.

Sex of Respondent

In the study of accuracy in reports of savings accounts in the first field experiment there was little difference between the reports of male and female respondents (Table 30). If anything, the data point in the direction of more accurate reports from men, but the difference is well within the margin of sampling error.

The results in the second experiment, the study of cash borrowers, were similar. If anything, the male respondents were more accurate, but the differences were well within the margin attributable to chance (Table 48).

It will be recalled that in the third field experiment the preferred respondent was varied between the head and the wife. No differences in accuracy of response were found (Table 59).

Psychological Variables and Related Behavior Variables

This section summarizes briefly the relations observed between psychological variables and response error. Also included are some variables which are measures of behavior but are of interest because of the possible relations between the observed behavior and the psychological characteristics of the respondents.

Keeping Records of Money Spent

In the study of response error in the reports of savings accounts in the first field experiment it was proved that 59 percent of those respondents who keep records of money spent were accurate within \$1,000, in contrast to 21 percent of those who say they keep no records (Table 31).

In the study of cash borrowers this relationship seems to have been reversed. Of those who report that they keep some records, 35 percent report the known loan. Of those who report that they keep no records, 61 percent report the known loan (Table 54).

In the study of savings account owners in the third field experiment the pattern of results was similar to that in the study of savings account owners in the first field experiment. Of those who reported that they keep records, 50 percent were accurate within \$1,000, while of these who reported that they keep no records, only 32 percent were accurate within that margin (Table 69).

These results present something of a puzzle. As was noted earlier in this report, all savings account owners necessarily keep a record in the form of a passbook. Thus, all of these people must have access to the necessary information to report accurately. Cash borrowers also may be presumed to have a record of payments to be made. The difference may be one not so much of actual availability of records as of willingness to report them or think of them as such.

Memory Error

In both of the field experiments involving savings accounts it was possible to compare accuracy of report as of a current date and as of a date six months or a year prior to the interview. In both studies no differences in report associated with this difference in date were found (Tables 32 and 70).

Attitudes Toward Borrowing

In the study of cash borrowers there is clear evidence that those with favorable attitudes toward borrowing money were somewhat more likely to report the known loan than those with unfavorable attitudes. Of those respondents who scored 10 to 12 on a scale of attitudes toward borrowing, that is, with favorable attitudes, 47 percent reported the known loan, compared with 30 percent of those scoring 0 to 5 on the attitude scale (Table 50).

Conformity Score

In the study of cash borrowers respondents were scored on a scale to measure conformity to social dicta. A low score indicated low conformity, while a high score indicated high conformity. There were substantial differences in the proportion reporting the known loan scoring different positions on this scale. Of those near the extremes of the scale only 20 percent reported the known loan, compared with 71 percent of those falling in the middle of the scale (Table 51).

Personal Effectiveness

Respondents in the study of cash borrowers were also scored on a scale of personal effectiveness. Those scoring low in effectiveness tended to report more accurately (Table 52).

Family Norms with Regard to Money

In the third field experiment questions asked were designed to measure family norms with respect to reporting financial information. The evidence shows clearly that there is a connection between a tendency toward concealment in the family and concealment from the interviewer. The closest relation is between the age at which the respondent knew the income of the family in which he was growing up and failure to report the known savings account. Of those who knew under the age of 12, none failed to report the account. Of those who knew between 12 and 15, 18 percent failed to report the account. Of those who knew over 16 years of age, 27 percent failed to report the account. Of those who never knew, 40 percent failed to report the account (Table 72).

Rapport

From the mail reinterviews there is clear evidence of a connection between the rapport in the interview and the accuracy of response. Respondents with favorable attitudes toward the interviewer, the interview situation, and the study, generally report more accurately than those with less favorable attitudes. These results are summarized in the tables in Chapter VIII.

Rounding and Interviewers' Ratings

Reporting Round Numbers

There is evidence in the study of savings accounts owners in the third field experiment that respondents who report round numbers tend to be much less accurate than those who report numbers which are not rounded to more than one zero. Of those whose reports were not rounded to more than one zero, over 80 percent were accurate within \$1,000. Of those whose reports were rounded to two zeros, two-thirds were accurate within \$1,000, while of those whose reports were rounded to three zeros or more, about half were accurate within \$1,000 (Table 74).

Interviewers' Ratings

In the study of car debt in Chicago where interviewers did not know the details of the loan, they were asked to make a judgment as to whether they thought the response was accurate. This judgment was made only in a limited number of instances, and it was made badly. Of 12 interviews for which the interviewer thought that the response was accurate, 8 involved respondents who failed to report the selected loan.

In the study of accuracy of response in the third field experiment respondents were rated more accurately by the interviewers. Of 33 respondents who were rated "very accurate" by interviewers, 79 percent were in fact within \$1,000. Of 22 rated reasonably accurate, only 32 percent were within \$1,000. The interviewers were most successful in telling whether the respondent failed to report the account completely. This procedure would have been more satisfactory as a way of validating the ratings if it were not for the possibility that the interviewers may have guessed that the sample of respondents was a sample of owners of savings accounts. A shrewd guess on this point would have helped the interviewer to tell who was failing to report accurately (Table 75).

Evaluation of Specific Techniques

Review and Results of Techniques

It is the purpose of this section to review briefly the specific techniques of data collection which have been tried in this investigation and to state the main results with regard to each technique.

Use of Long Versus Short Questionnaires

In the study of car debt in Chicago, the length of the questionnaire was varied systematically. Comparisons can also be made between data from the regular Surveys of Consumer Finances and data from the small special study devoted entirely to car debt.

The interpretation of the results is complicated by the mixed character of the loans in the Chicago study. It is clear, however, that interviewers did much better in obtaining data on primary debt on cars in the special inquiries than in the Survey of Consumer Finances. Studies which focus attention on a limited topic are likely to obtain more accurate data on that topic than studies which cover many topics.

Knowledge of the details of a car loan by an interviewer is no guarantee that she will be able to induce a respondent to report the information. There is, however, evidence that an interviewer is somewhat more likely to obtain a report of the facts about a loan under these circumstances.

Use of an Unstructured Approach

In interviews with owners of savings accounts in the first field experiment, half were approached using a structured questionnaire and half using an unstructured questionnaire. The unstructured approach as used in this project was not a success. Non-response was higher for the unstructured interviews, and there was no gain in accuracy of report.

A basic problem with the unstructured approach is the difficulty in standardizing it. As used in this project the approach seems to have been threatening to respondents and to interviewers. Part of the difficulty may well have been that the interviewers were accustomed to a different approach. It is also probable that the interviewers were sufficiently trained in non-directive interviewing to penetrate to a level of discussion which was sensitive but that they were not sufficiently trained to deal successfully with the feelings aroused.

Use of a Reinterview as a Device for Data Collection

The respondents in the study of owners of savings accounts in the first field experiment were reinterviewed half a year after the first interview. The reinterviews included questions about the fall balance, and questions about any discrepancy between the two reports of the fall balance were also asked whenever the interviewer felt that rapport would permit.

This procedure led to a modest but distinct improvement in accuracy. In particular, gross overreports were largely eliminated, and the proportion who failed entirely to report the account was reduced.

Use of the Respondent's Name

In the study of cash borrowers in the second field experiment, the sample was divided into three groups. In the first the respondent was asked for by name, but not in the second. There was no difference in response error between the first and the second group. The third group was approached without use of the respondent's name and the sealed envelope technique was also used. In this case there was evidence of reduction in response error.

These results suggest that it is not the use of the name which is crucial so much as the assurance that the financial information will be kept private and confidential. The simple statement of the interviewer that the data will be so treated seems to need reinforcement. It was the combined effect of anonymity plus the sealed envelope technique which led to reduced error.

Use of the Sealed Envelope Technique

In the interviews with cash borrowers there was an improvement in accuracy resulting from use of the sealed envelope technique. In this procedure the financial data were sealed in an envelope to be mailed directly to the University of Michigan. In some instances the interviewer filled out the form, but not in others. In every interview (except in rural areas) the respondent was invited to accompany the interviewer to the nearest mail box while the data were mailed.

Experimentation with this technique should be continued to develop the most effective way of using it. The additional work may also serve to measure the effectiveness of the technique more accurately than was possible with the small sample in this study. Results may differ from one type of respondent to another.

The Effect of Paying Respondents

In the study of owners of savings accounts in the third field experiment, in half the sample the interviewer was instructed to offer to pay the respondent, but not in the other half. The technique of offering payment as used in this study was not a success. The response rate was actually lower among the paid group, and there was no appreciable reduction in response error.

It is possible that variations on the technique of payment would be successful. One suggestion was to leave the respondent to decide in private whether to send in the financial form and accept payment, or not.

The Effect of Designating the Head or the Wife as the Preferred Respondent

In the study of owners of savings accounts in the third field experiment, in half of the samples the husband was the preferred respondent and in the other half, the wife. The interviewer was permitted to substitute in either direction if she felt that it was necessary in order to get an interview from the family or if she was asked to do so by the person first contacted. The results suggest that there is not much difference in accuracy of response between these two procedures.

These procedures provide flexibility which can be used to advantage when one member of a married couple is better informed about finances than the other. In most families husband and wife are both well informed and there seems to be no need to insist on the husband as the respondent when what is desired is accurate financial data about the family.

Analysis of Response Error

This section is intended to be a systematic analysis of response error in reports of factual information in economic surveys with special reference to those items of economic information needed in estimates of saving. It is intended to bring together conclusions from past research on response error, especially the research mentioned earlier in this report, and to pose questions which may require further research. The section is divided into two parts, the first of which is devoted to a description of three basic causes of response error and a discussion of their relative importance. The second part is devoted to further analysis of the motivation of respondents in economic surveys.

Three Causes of Response Error

The reasons for response error are complex. No simple theory can begin to do justice to the facts. It is possible, however, to distinguish three classes of reasons for error in reports of factual data in economic surveys:

1. Motivational factors. The respondent may not wish to give to the interviewer the correct answer to the question. He may be indifferent as to whether he conveys the correct information. He may even wish to conceal or to distort the facts.
2. Failure of communication. The respondent may not understand what information is required of him. Or, even if the respondent understands and tries to communicate the correct information, the interviewer may not understand and record correctly what the respondent is trying to tell him.
3. Inaccessibility of the information to the respondent. The information required may not be available at all to the respondent or may be available to him only with varying degrees of difficulty. While the respondent may recall some information easily and accurately, not all desired information is likely to be so accessible to him. There will be psychological forces at work which will influence the rate at which different items are forgotten and may lead to distortions in what is remembered. Resort to financial records may be difficult: they may be lost, they may be poorly organized or incomplete, and they may be physically remote.

An error in response may be attributable to any one of these three reasons for error. An accurate response is obtainable only if no failure occurs in any of the three areas. For a respondent to convey accurate information he must be motivated sufficiently to be willing to give the information to the interviewer, he must understand what is required and the interviewer must understand his

answer, and the respondent must himself know the information or have access to it.

It is useful to distinguish these three categories of reasons for error because the remedy which is appropriate will depend on which of the three is important in a given investigation. For example, the basic problem may be in the area of accessibility of the information to the respondent. People may tend to recall incorrectly a particular economic fact. If so, it may be useful to urge them to consult their financial records. If, however, the basic problem is one of unwillingness to disclose the information, it may be useless to urge people to consult records. The respondent may know perfectly well what the true answer is but think it is nobody's business but his own. If so, pressure to consult his records may serve no useful purpose and may make him even more suspicious and secretive.

In the same way, if the problem arises in the area of communication, the cure will lie in that area. For example, words may be used in a question which some people do not understand or understand in a sense different from that which is intended. If so, the remedy is to revise the question. If, however, the respondent already understands but seeks to conceal his affairs, clarification of questions will be useless.

The question of which area is the one which contains the most important cause of error is empirical. It is not likely to be solved in general, since there is every reason to suppose that the relative importance of the three types of reason for error will vary depending upon what data are sought and by what methods. For example, the importance of memory error may be expected to increase the farther back in time the respondent is asked to go and the less important to him is the information being asked. It may be meaningful, however, to ask which of the three is most important in inquiries on consumer savings in which questions are asked about major financial transactions in the past year and about current financial assets.

There is considerable evidence that the principal cause of response error in financial surveys is failure of motivation. This evidence will be reviewed briefly later. The only major qualification to the proposition that the problem is a problem in motivation arises in connection with questions which involve change in liquid assets or change in income over a year; here there is evidence which indicates that problems of memory error also are important.

Interviews in the First Field Experiment

As has been previously reported, in the fall of 1958 interviews were conducted with 109 persons, each of whom was the owner or part owner of a savings account of \$1,000 or more. Information was obtained as to the accuracy of the report of each about his account.

The resulting percentage distribution, it will be recalled, was as follows:

<u>Response Error in Fall Report of Fall, 1958, Balance</u>	<u>Percent of All Interviews</u>
Failed to report account	24
Account owned by respondent or spouse, or the two jointly	18
Account owned entirely or in part by someone other than respondent and spouse	6
Reported account, balance not ascertained	19
Reported account but refused to state balance	14
Reported a total in several accounts but would not break it down	5
Reported balance for account	57
Underreported by \$1,000 or more	16
Overreported by \$1,000 or more	7
Accurate within \$1,000	34
Total	100

It is most reasonable to attribute these errors to lack of motivation, failure of communication, or inaccessibility of the information to the respondent? The 14 percent who refused the amount explicitly are clearly failures in motivation. The 18 percent who said they had no account when they owned one singly or jointly with their spouse are probably also failures in motivation. It is hard to believe many men are unaware of the existence of savings accounts of \$1,000 or more which they own, and it is also hard to believe they do not grasp the questions about them.

As the size of the error decreases the hypothesis of memory error becomes more plausible. As a first approximation one might speculate that the 34 percent of reports accurate within \$1,000 are

accurate within the limits of memory error. The hypothesis of memory error is less plausible for the errors of \$1,000 or more. Further research would be necessary to investigate the relative importance of motivation and memory for the smaller errors and the interrelations between the two types of factors. But the data available from this project are at least consistent with the hypothesis that the excess of understatements (16 percent) over overstatements (7 percent) represents a tendency to partial concealment of savings accounts. People may be willing to reveal that they have an account and to reveal part of the money in it but may hold back from complete revelation of their holdings. It is also noteworthy that reinterview and rechecking with respondents almost eliminated overreports but not underreports. Reporting too high a balance was a "mistake"; hence it could be corrected easily. People reported too low a balance for reasons which persisted: reasons of concealment.

Viewed as a whole, the data from this project strongly suggest that failure of motivation was here an important source of error. The data from the other studies of savings accounts point in the same direction.

There is also evidence in this research that specific motives are correlated with accuracy of report of savings accounts. If rapport in the interview is good, the report is more likely to be accurate. If the family is one with a norm of free discussion of financial affairs, the report is more likely to be accurate. These relationships identify some of the motives involved and thus tend to confirm the view that motivation is the key to accuracy of report of savings accounts.

The one finding which points in the opposite direction is the tendency for respondents to report their own accounts more accurately than those of others in the family. Here the problem is one of accessibility of the information to the respondent. Most of the errors, however, were made by people talking about their own accounts.

Reports of Car Debt by Individual Respondents in the Survey of Consumer Finances

In reports of debt as well as savings, the problem is mainly motivation. In a special check using data from the 1956 Survey of Consumer Finances as reported earlier, information was obtained from state motor vehicle departments concerning recorded liens. Altogether there were 33 interviews with people who bought a car in 1955 for whom a lien was recorded. Of the 33, eight, or 24 percent, failed to mention the debt.

These results are strikingly similar to those for savings accounts. Once again there is a group of fairly accurate reports;

in the study of car debt they are a large fraction of all reports. Once again the largest source of error is the failure of some people to admit the fact that the item appears at all in their balance sheet. Once again it is hard to believe that a large fraction of the respondents failed to grasp the question or did not know that they bought the car on credit. But error in memory on this point cannot account for the data described earlier, nor can it account for the fact that the Surveys of Consumer Finances regularly turn up only about six-tenths of the estimated aggregate of short- and intermediate-term instalment debt.

Can the problem be one of failure of communication? The formulation of the questions on consumer debt has been the subject of much attention on the part of those responsible for the design of the questionnaire of that Survey, and from year to year substantial changes have been made in the questions on debt. In 1958 two versions were tried on halves of the sample selected on a random basis. There is no precise measure of accuracy of report built into the Survey. Nevertheless, the results of experience in 1955-58 are suggestive.

Extensive efforts to "improve" the debt questions were made in 1956. The efforts at improvement consisted essentially of the addition to the questionnaire of a large number of detailed questions about whether the respondent owed to particular lenders. These questions were added to the questions asking about debt in the context of questions asking about individual transactions, such as the purchase of a car. Thus, for many kinds of debt, the respondent was asked not once but twice whether he owed it.

It is possible to estimate year by year the proportion of the aggregate which should have been picked up by the Survey which was in fact picked up. This method has the advantage of emphasizing the change in the percent of the aggregate picked up by the Survey rather than the level of the percent picked up. For the years 1955-57, the statistics are as follows:

Estimate from S.C.F. as a Percent of
Federal Reserve Estimate of Aggregate
Short- and Intermediate-Term Debt

1955	63
1956	54
1957	62

Comparable data for earlier years are not readily available.

Note that the changes made in 1956 resulted in no improvement. If anything, they made matters worse. In 1957 the form used in 1955 was restored, and the level of accuracy returned to about the former level.

In the B questionnaire of the 1958 Survey, the problem was approached differently. The underlying reasoning here was that people may be confused by the proliferation of types of loans and of lenders, but they do know what they are paying off regularly. Hence, after the usual questions about debt in the context of purchases, people were asked what they were making payments on. The following tabulation shows the main results for the two halves of the sample:

1958 Survey of Consumer Finances

	<u>A</u>	<u>B</u>
Mean personal debt	\$502	\$418
Mean, holders only	\$823	\$734
Percent with personal debt	60.9	56.9

Once again, the changes, if anything, made the results worse. Both the percent reporting any debt and the mean debt for those who did report some debt were lower for the B than for the A questionnaires.

Although the experience with the debt schedule in the Survey of Consumer Finances has been reported briefly here, much time was spent in developing questions and pretesting them. It seems reasonable to conclude that in this content area, as in the field of savings accounts, the principal problem is probably not a failure of communication. Negative evidence is never conclusive, but it can be highly suggestive. And here what is suggested is that the main problem is in the area of motivation.

There is also positive evidence which points in the same direction. Variations in peoples' attitudes toward debt, for example, are associated with variations in accuracy of report. People who think that debt is not a good idea are reluctant to report that they owe money. Additional evidence of the importance of motivational factors comes from the experimental manipulations. The manipulation which was most successful was the sealed envelope technique, and the success of that technique seems to be attributable to its tendency to reduce respondents' resistance to disclosing financial information. The improvement in accuracy resulting from use of this technique thus supports the main conclusion of this section, that the problem of response error in reports of consumer savings is in large part a problem of motivation.

A Further Analysis of Respondent Motivation

The ideal analysis at this point would involve a clear statement of the various classes of motives relevant to response error and an equally clear statement of the manner in which such motive classes interact so as to influence the respondent in economic interviews. Furthermore, such ideal statements should be consonant with the principles of a general theory of motivation. Unfortunately, there is no "general theory of motivation" which is fully accepted by the psychological profession. In addition, at this early stage of research on response error, it is not possible to state the interrelationships of different classes of motives. In fact, even a systematic classification of motivational factors is limited; but such a classification is an essential first step in the genesis of a motivationally oriented theory of response error, and the following discussion suggests the present views of the authors regarding both a classification of motivational factors and the more obvious interactions between the classes.

Two main classes of motivational factors immediately come to mind:

(1) Predispositions of the respondent which existed prior to the interview. These predispositions are relatively stable, are primarily a function of past experience, and represent the various manners in which the respondent copes with his environment.

(2) Predispositions of the interviewer which existed prior to the interview. As in the case of the respondent's predispositions, these, too, are stable, are based on past experience, and represent means of coping with the environment; but an important elaboration is necessary in the case of the interviewer: his training. The interviewer's predispositions which are pertinent to the interviewing situation are heavily dependent upon his training and his experiences on the project in question prior to a particular interview.

There is a third class of factors which is not in itself made up of motives but rather is one which affects the motivational states of the respondent and the interviewer:

(3) Procedures used in the study which affect the predispositions of the interviewer and to a lesser extent those of the respondent, but which have their greatest influence upon the next class of factors:

(4) Interaction between respondent and interviewer. The resultant communication (or lack thereof) of the respondent will be a function of each of these three classes of factors and of the interactions among the classes.

Each of these categories requires elaboration and discussion.

Predispositions of the Respondent

There is much evidence in the present research of the importance of the predispositions of the respondent as determinants of his behavior during the interview. These predispositions may be roughly classified into four sub-classes, as follows:

Social predispositions -- interactions with people. In the study of cash borrowers, two general characteristics of the respondents' social behavior were shown to be important: personal effectiveness and social conformity. The persons who scored low on effectiveness tended to report their cash debts more accurately than those who scored high. This result has been interpreted tentatively by the investigators as reflecting less ability by the person with low effectiveness to resist direct pressure from the interviewer.

The persons who scored in the middle of the range on social conformity tended to report more accurately than did those persons who had either very high or very low conformity scores. A speculation can be offered in explanation of the "inverted U" shape of the accuracy-conformity relationship: the interviewer, in the course of an interview, gives forth innumerable cues which define what is expected or desired behavior on the part of the respondent. A respondent who has a low conformity score is not likely to be very sensitive to the expectations of others, and therefore the implicit cues given forth by the interviewer are unlikely to have much effect on the motivation of the respondent. A respondent who has a mid-range conformity score, however, is probably very sensitive to the expectations of others and therefore is likely to attend to the cues of the interviewer, allowing those cues to define the expectations for the interview situation and then behaving in terms of that definition. Notice that this line of reasoning suggests that the stronger the conformity tendency, the greater the need for a well-defined situation (well-defined in terms of what is expected or approved behavior) and the less the influence of other factors (such as his attitudes toward talking about financial matters). A respondent with a high conformity score presents a somewhat different story: he is so hypersensitive to the expectations of others and thereby is so needful of a well-defined situation that he cannot wait for the subtle and implicit cues of the interviewer to define the situation. Instead, he must structure the situation immediately and does so by falling back on some general social norms which hold financial information -- especially regarding cash debts -- to be private and perhaps shameful. An equally tenable explanation for the high conformer is that his hypersensitivity is uncomfortable for him, for it makes him dependent upon the whims of others, and he therefore defends against it by reacting negatively to such expectations. These speculative explanations can be stated in the form of hypotheses and can be

tested in future investigations. If any of them are supported, it is quite possible that they could be utilized so as to reduce response error.

Regardless of the possible explanations, however, the present research contains what seems to the investigators to be convincing evidence of the importance of these two dimensions of personality, although the results obtained should be regarded as no more than preliminary. More work might well be done on measuring these dimensions more carefully and relating them to other characteristics of the individual. More work is also needed to clarify the relation between these variables and response error.

Attitudes toward financial practices, financial matters. The results of these investigations suggest an interpretation which is current in recent sociological literature: the importance of the respondent's view of his own social status. A person's conception of his social status involves a picture of a hypothetical person who ideally fits into the status position. This hypothetical person has certain characteristics which are consistent with each other -- e.g., a certain level of income, a certain amount of savings, an allowable amount of debt, allowable reasons for indebtedness, a certain level of education -- and which blend together to define the status position. A respondent who sees himself as inhabiting a specific status position but also as having one or more characteristics which are inconsistent with that status (e.g., a low income, too little education, cash indebtedness) will feel under pressure to distort or withhold information in financial surveys. In the present studies, there is a positive correlation between income and willingness to report savings accounts; on the other hand, there is a negative correlation between income and willingness to report cash borrowing.

Thus, respondents may tend to report to an interviewer those aspects of their financial behavior or their financial situation which seem to them appropriate to someone of their economic social status but not to report those aspects of their situation which seem to them inappropriate. The respondent who has taken some action which he thinks is not creditable and not appropriate for someone of his social position is less likely to report it than someone in the opposite situation. Hence, it seems reasonable to predict that respondents will tend to report or even to overreport those actions which seem to them to be consistent with their status. This type of overreport has been found in other investigations, notably in studies of air travel, which seems to be overreported and is seen as an indicator of high status. This tendency, however, is not a general tendency for everyone to overreport all types of high status behavior. Low-income people do not have the same pressure to reveal savings accounts as high income people for the reason that possession of a substantial

savings account is not seen as a logical counterpart of their economic position.

The consequences for the analysis of survey data hardly require emphasis. The analyst will find himself, to the extent that this tendency operates, inclined to exaggerate the relationship between income and other measures of economic status.

As a special case of "status appropriateness" or "status consistency," one might look at the specific attitudes of the respondents regarding borrowing money. The results show that people who disapprove of borrowing are less likely to report that they borrow than those who have favorable attitudes toward borrowing. More generally, then, accuracy of response may be a function of the specific attitudes of the respondent to a particular type of financial transaction or a particular entry in his balance sheet.

Attitudes toward this research and its sponsor or toward research in general. Respondents may also vary in their attitudes toward the desirability of social research and toward those organizations which conduct such research. In the present investigation this interpretation has been given to the positive correlation found between education and accuracy of report. It will be recalled that education is positively correlated with accuracy of response even in the study of cash borrowers in which the relation between income and accuracy of response is negative. It seems reasonable to suppose, therefore, that as the level of education of a group of respondents increases it is more possible for the investigators to appeal to favorable attitudes toward research and research sponsors.

General willingness to talk about financial affairs. There is evidence in these studies and from other research that people ordinarily regard their financial affairs as private. Most people, for example, when asked will say that they would not expect others to give accurate financial information.

There is much more variation in the freedom with which financial information is discussed within a family. It has been shown in these studies that there is a positive correlation between willingness to reveal accurate financial information and the freedom with which respondents were informed about finances in the family in which they grew up as well as with their views about the proper age at which to discuss financial matters with children. These relationships imply that some individuals will be much harder to interview about financial matters than others. It will require special procedures to convince respondents to divulge to an interviewer information about which they are normally reticent not only with their friends and associates but also with their wives and adolescent children.

There is also evidence in the studies of savers and cash borrowers that there may be differences in willingness to discuss financial

affairs which are associated with differences of financial position. The most direct indication of these differences came from the use of a list of sentence-completion items in the general area of peoples' finances and the use of money. A series of nine identical sentence-completion items was given to each of the two samples. The items included such incomplete sentences as the following: "When he looked back over his records of the money he had spent. . ." and "When all his money was gone, he. . ." Many of the owners of large savings accounts were unable or unwilling to respond to these items. Of the high savers 27 percent balked on the first of the items just mentioned, compared with only 5 percent of the sample of cash borrowers. On the second item 16 percent of the savers in contrast to 1 percent of the debtors balked at the item. The mean rates of refusals over all of the financially oriented items were 12 percent of the savers and only 1 percent of the debtors per item. This difference strongly suggests a greater sensitivity of feeling about such matters. It seems reasonable to infer that the greater intensity of feeling on the part of the savers is part of the reason why interviewers seemed to find it more difficult to interview respondents who were high savers about financial matters than to interview cash borrowers.

In general, then, there is evidence that there are substantial differences among respondents in their willingness to discuss their financial situations. These differences may be viewed as having their origins partly in the family norms about money and partly in individual differences in sensitivity over financial matters. These two explanations, of course, are by no means mutually exclusive.

Predispositions of the Interviewer

There is little or no evidence in the investigations reported in this volume of direct relationships between characteristics of interviewers and the accuracy of response obtained by the interviewers. Attempts were made to measure the variation in accuracy of response from interviewer to interviewer, but these attempts showed no differences larger than might be attributed to chance. This absence of an observed relationship is not surprising since the research was not designed to study differences among interviewers.

On the other hand, there is indirect evidence in this project of the importance of the original approach made by the interviewer to the respondent. It will be recalled that there were substantial differences in the response rate between the experimental and the standard interviewing procedures in both of the field studies of savings accounts. The investigators are of the opinion - - supported by discussions with the interviewers - - that these differences in technique affect the level of confidence of the interviewer which in turn affects the efficacy of the interviewer's approach to the next potential re-

spondent. The short, open-ended experimental questionnaire serves as a good example of this "negative feed back" process: the interviewer enters into an interview situation using a questionnaire with which she is relatively unfamiliar, a questionnaire very different from the long, detailed, structured instrument which she has used for years. Because she is unfamiliar with such an unstructured technique, she becomes anxious in the interviewing situation and leaves with the feeling that it was a poor interview. Anxiety arises upon contemplation of her next interview involving the experimental questionnaire; this in turn lowers her self-confidence and thereby makes it difficult for her to overcome the initial reticence of the respondent upon first being approached. This increases the likelihood of a refusal, which in turn enhances the anxiety regarding the instrument, subsequent interviews, and her own capabilities.

This anxiety effect can be offset in part by careful and intensive training of the interviewing staff regarding new techniques, such training being designed to make the interviewers familiar and at ease with the new techniques.

One might say, then, that the efficacy of the interviewer generally is enhanced by increasing (1) her knowledge of the concepts involved in the questionnaire (e.g., knowledge of the differences between common and preferred stock in a financial survey of investment practices), (2) her morale (that is, minimizing her anxiety about the instrument, maximizing her interest and "faith" in the study), (3) her skills in interacting with others, in establishing and maintaining the requisite rapport, and (4) the standardization of the approach being used (the more similar the approaches under various situations, the less deliberate attention the interviewer must give to her approach and the smoother the progress of the interview). Whenever a new or unfamiliar technique is to be used, great attention must be paid to the training of the interviewers in order to minimize any anxiety which might arise from contemplated use of the new technique.

Interaction Between Interviewer and Respondent

The predispositions of the respondent and of the interviewer, as well as the procedures used in the study, become meaningful variables only when the respondent and the interviewer actually interact. At the present stage of our response error "theory," it is not possible to specify and categorize the types of interaction which derive from the predispositions of the individuals involved and from the investigative procedures being used. On the other hand, the interaction process is an intervening stage between the earlier conditions of predispositions and procedures and the final outcome

of accurate -- or inaccurate -- response. Even though this intervening stage cannot be stated in terms of elements and their interrelations, it can be grossly measured in ways which relate predictively to the final outcome of the interview.

Certain measures of this type were made in our field studies, as was reported earlier in this chapter. The rapport established in the interviews and measured by the mail reinterview responses (Chapter VIII) was found to be positively related to accuracy of report of financial data.

Another descriptive index of the resultant interaction during the interview (third field study, Table 74) was the extent to which respondents used round numbers in reporting their savings. The greater the detail of reported figures, the greater the likelihood of such reports being accurate.

Ratings by the interviewers of the accuracy of the respondents' reports yielded ambiguous results. The ratings were made in a fairly rigorous fashion in the third field study and revealed some evidence of a positive relationship between rating of accuracy and actual accuracy of the report (Table 75), but the results are open to question as was suggested in the first section of this chapter.

What are the implications of this categorical analysis for actual minimization of response error in future financial surveys? Once again, given the present stage of the investigative attack against response error, only the beginning of an answer to such a question can be offered, and the answer must be based upon the control which the investigator can effect over the analytic categories discussed earlier.

In the first place, the investigator has no control over the predispositions of the respondent. On the other hand, it is possible for the investigator to utilize some of the respondent's predispositions to the advantage of the study. Such utilization, of course, is actually accomplished by the interviewer, who has been trained by the investigator. The respondent predisposition most likely to be amenable to such utilization is the tendency to social conformity. It would be premature to attempt to specify how this tendency should be taken into account, but it is possible to offer some speculations which may illustrate what might be done. If an interviewer can be trained to evaluate rapidly the conformity tendencies of the respondent, it may be that she can gauge her approach in terms of the needs of the respondent for a structured situation. For example, with a respondent with high conformity tendencies, it might prove to be best for the interviewer to set forth her expectations in an explicit fashion early in the interview, and to support such expectations by reference to all the other anonymous people who have given the requested information in an accurate fashion and by justifying the need for such information by subtle references to higher, centralized authorities.

In contrast it may prove that a respondent in the middle conformity range can best be approached with a less explicit definition of the interviewer's expectations. She may allow her expectations to be defined implicitly by means of the various cues which she presents in the course of normal interaction.

The predispositions of the interviewer are more open to control than those of the respondent, of course, primarily by virtue of the training process.

The greatest control, however, can be applied to the actual procedures used in the study. Except for field experiments, where comparisons of results from one field condition to the next are essential, it is not necessary to use exactly the same procedures for all respondents, especially in the early stages of the interview. Instead, a limited range of procedures could be made available to the interviewer which she would use at her discretion, depending upon her perception of the relevant characteristics of the situation.

Observations on the Conduct of Research on Response Error

A major conclusion of this investigation is that response error is of great importance in studies of savings accounts and of cash loans. This conclusion is not novel, since it was known in advance that these were areas in which the survey results would not be consistent with outside statistics. Nevertheless, the results of this investigation emphasize the serious nature of the errors and the importance of taking steps to cope with the problem of response error.

The second major conclusion of this investigation is that the problem of response error is not insoluble. Steps can be taken to control response error and to reduce it, and the existence of response error can be taken into account in making use of survey data.

The most important single recommendation which emerges from this investigation is that more resources should be put into studies of response error in the future. When the problem is one of obtaining the most accurate possible estimate of a parameter, and the interviewing technique being used tends to result in an underestimate of that statistic by 25 to 50 percent, it is not an efficient use of resources to take a large sample. Money spent on a large number of interviews could much better be spent on a smaller number of interviews plus a study of response error.

There are three things which can be done about response error. The first is to measure it. Measurement is the necessary preliminary to any further methods of coping with response error. In itself it can be extremely useful simply to know the approximate margin of response error in a particular parameter. The second step is to develop and use techniques of analysis which will lead to conclusions that will still be valid even given the response error. For example, it has been shown in this investigation that in such surveys as the Sur-

vey of Consumer Finances response error in reports of savings accounts is substantial. It has also been shown that this error is almost entirely an error of underreport. It is possible, then, to use data from the Survey of Consumer Finances to segregate individuals known to have high savings accounts. The characteristics of these individuals may then be examined, and, in particular, the question may be asked whether they behave differently from other members of the population, other things being equal. The third step which can be taken to deal with response error is to study its causes and develop techniques to reduce it or, hopefully, to eliminate it. The remainder of this chapter will be concerned with observations based on the experience in this investigation as to how such studies may best be carried out.

The first requisite for the study of response error is a method of validation for the reports on individual respondents. This requisite is more easily stated than attained. The investigators have found that the most successful procedure is to rely on a list of individuals about whom it is known in advance of the interview that certain information is available. Ideally the names on this list should represent a probability sample of the population to be studied, but it is better to have a list of names which is not a proper sample of the population than to have no list at all. In obtaining such lists it is essential to guarantee the anonymity and the confidentiality of information about individual respondents. This need for confidentiality can be met by devices such as those which were adopted in this investigation. Interviewers do not need to know the origin of the addresses to which they are sent. It is possible for interviewers to locate particular individuals without using the names of these individuals, although this introduces an element of difficulty into the interviewing situation, since a conscientious interviewer may keep wondering whether she is talking to the right respondent. It is possible to introduce into the sample names of individuals chosen from such innocuous sources as telephone books, so that interviewers cannot possibly know that any individual was selected from a list with a given financial characteristic. It is also possible to make validity checks by using coded numbers, intermediary organizations, and other careful safeguards which guarantee the anonymity of specific persons.

There is one inherent limitation in studies of this type. If the information obtained about the individuals to be interviewed is not complete, there is always the risk that that portion of information which is checked may be correct while the portion which is not checked may not be correct, or vice versa. For example, there may be two men each of whom has two savings accounts. It may be possible to interview each of the two men and one may report the account that is being checked and fail to report his second account, while the other fails to report the account being checked but does report

his second account. These men actually have given equally accurate information, yet one would appear to be an investigator as reporting accurately while the other would appear as reporting inaccurately. This limitation can be removed only by obtaining complete information for checking purposes, a goal which is frequently difficult or even impossible to achieve.

A second problem or class of problems arises in checking the information in the interview against the information to be matched with it. The possibility may arise that an error will occur in the match rather than in the data itself. For example, an account which is actually a joint account may be reported as a single account, or vice versa, and this may lead to an improper match of the report against the actual information about savings accounts. This problem can be reduced, although not eliminated, by attention to it in an interview. It is possible to ask enough information about an account to reduce the error in matching. The researcher here is faced with a dilemma. The procedure which he uses to get information for matching may create problems in itself which tend to affect the accuracy of report. For example, by asking detailed questions about a particular bank account and the bank in which it is located, and by asking in whose name in the family the account is held, the researcher may give the respondent the feeling that his privacy is being invaded. The data in this report indicate that confidentiality and privacy are of basic importance to many respondents. The investigators believe that the most satisfactory approach to this problem is to sacrifice something of precision in matching in favor of reducing the difficulty of the interviewing situation. Compromises can often be worked out. It may not intrude so much upon the respondent's desire for privacy to ask for the ownership of the account in terms of head or wife or relationship to head, "so that the interviewer can keep the amounts straight." This procedure seemed logical when asking about the uses of the several accounts separately. In addition, information about age, sex, and occupation are helpful in distinguishing the account owner from other members of his family. If the name is known to the interviewer, even though she is not allowed to ask for the respondent by name, a certain amount of checking may be done. The name in which the telephone is listed may give a clue; so will the name on mailbox or doorbell, and first names are often mentioned by family members in talking to one another. If the family has just moved to this address recently there is a good chance that the account owner no longer lives there, and an interview need not be wasted on it.

Mention may also be made of administrative problems which arise in connection with validation studies when these involve an organization other than that primarily concerned with the research. In these circumstances it is likely to require considerable effort on the part of the research team to enlist the necessary cooperation from the

organization with the financial data. Even when these basic negotiations have been successfully completed the researchers must allow for delay at each step when action must be taken by the cooperating organization. Frequently the organization will not be accustomed to the selection of random samples. Even when it is statistically sophisticated, the organization or its staff may have other work of higher priority than cooperating with the research team. Misunderstandings and delays may also occur if there is a separate stage of checking interview reports against records after the completion of interviewing. In a word, the completion of studies of response error takes time.

An additional major conclusion of this investigation is that there is a need for a sophisticated theory of response error. It is not enough to measure response error and to try out various techniques of interviewing designed to reduce it. A procedure in which many techniques are individually tried out and where each technique has an equal probability of success is likely to be wasteful. What is required is a basic understanding of the causes of response error, or, in a word, a "psychology" of response error. The development of such a psychology is not an impossible task. The investigators feel that they were able in this research to make headway in that direction. It is their belief that further efforts along this line are likely to be the most efficient way to reduce response error in future studies.

APPENDIXES

APPENDIX A

Sampling Error

Many of the results reported in this investigation are in the form of percentages. Owing to the peculiarities of the sample designs used, more interest attaches to the differences between sub-groups within a survey than to differences in the levels of the estimates from one survey to the next.

The tables of sampling errors of differences which follow are based on approximation to the standard formula for differences between simple random samples. The approximation used was where

$$60 \sqrt{p(1-p) \left(\frac{1}{n_1-1} + \frac{1}{n_2-1} \right)}$$

p is a proportion approximating those being compared and n_1 and n_2 are the number of cases in the two samples.

To use the sampling error tables, take the number of cases upon which one of the percentages being compared is based to enter one row of the appropriate sampling error table. Find the column appropriate for the number of cases upon which the second percentage being compared is based. The cell at which these two cross is the approximate difference in percent needed between two percentages to be significant at the 5 percent level. The cut-off values for significance should not be taken as literal. They are grossly approximate because some of the assumptions upon which these sampling error tables are based (strict random sample, and so forth) are met in an approximate way.

APPENDIX B

QUESTIONNAIRES USED IN FIELD EXPERIMENTS

Questionnaire A, First Field Experiment

Questionnaire B, First Field Experiment

Reinterview Questionnaire, First Field Experiment

Questionnaire, Second Field Experiment

Questionnaire, Third Field Experiment

Financial Form, Third Field Experiment

QUESTIONNAIRE A, FIRST FIELD EXPERIMENT

Interviewer: _____ Interview No. _____ Date: _____

INFORMATION ABOUT THE DWELLING UNIT

IN THE "B" QUESTIONNAIRE DO NOT ASK THESE QUESTIONS UNTIL THE END OF THE QUESTIONNAIRE							
1	2	3	4	5	6	7	8
First Name of DU member 18 years and over who lives here	Relationship of DU member to the head of the DU	Family Unit No.	Does he (she) usually receive \$15 or more per week from any source?	IF YES Does he (she) keep his finances separate?	IF YES Does he (she) contribute less than one-half of his income?*	Spending Unit No.	Indicate respondent by check
	HEAD OF DU	1	-	-	-	1	

ASK WHEN FILLING OUT THIS BOX:

9. In this house (apartment), then, there are ____ people 18 or over, is that right?

* If he (she) contributed less than one-half, he (she) is a separate spending unit. If no, he (she) is not a separate spending unit. The main spending unit should be numbered "1." Please number all spending units.

ASK ABOUT THIS FAMILY

10. We'd like to know whether there have been any changes in your family during the last year. Is there anyone living here now who wasn't here a year ago? yes no

IF YES 11. Who? _____

12. Was there anyone living with you a year ago who isn't here now? yes no

IF YES 13. Who was it? _____

ASK ABOUT SU INTERVIEWED

14. Do you (SU covered by this interview) have any children under 18? yes no

IF YES 15. How many? _____

16. How old are they? _____

17. What are their first names? _____

SCHEDULE A: GENERAL ECONOMIC ATTITUDES

- A1. Would you say you folks are better off or worse off financially now than you were a year ago? _____
A1a. How is that? _____

- A2. Are you folks making as much money now as you were a year ago, or more or less?

- A2a. Why is that? _____

- A3. How about a year from now—do you think you people will be making more money or less money than you are now, or what do you expect? _____

- A3a. Why is that? _____

- A4. Now considering the country as a whole, do you think that during the next twelve months we shall have good times or bad times or what? _____

- A4a. What do you have in mind? _____

- A4b. How do you think times are now? _____

- A5. Now speaking of prices in general, I mean the prices of the things you buy — do you think they will go up in the next year or go down, or stay where they are now?

- A5a. Why will they do that? _____

AN INVESTIGATION OF RESPONSE ERROR

SCHEDULE B: HOUSING

B1. Now I have a few questions about your home. Do you (SU) own this home or pay rent or what? own home pay rent neither owns nor rents both

IF
BOTH OR
NEITHER

B2. How is that? _____

IF
RENTS
OR
BOTH

B3. About when did you move into this house (apartment)?

before 1920 1920-29 1930-39 1940-45 1946-49 1950-51
 1952-53 1954 1955 1956 1957 1958

B4. About how much rent do you pay a month? \$ _____

IF OWNS
OR
BOTH

B5. About when did you buy this home? before 1920 1920-29 1930-39
 1940-45 1946-49 1950-51 1952-53 1954 1955 1956 1957 1958

IF
BOUGHT
BEFORE
JULY 31,
1957

B6. Could you tell me what the present value of this house (farm) is? I mean about what would it bring if you sold it today?
_____ \$ _____

IF
BOUGHT
AFTER
JULY 31,
1957

B7. Was it a newly-built house or one that had been lived in before?
 newly-built lived in before

B8. How much did the house and lot (farm) cost (total price)?
_____ \$ _____

B9. Do you have a mortgage on this property? yes no

IF
MORTGAGE

B10. Do you also have a second mortgage? yes no second mortgage

First mortgage Second mortgage

B11. Approximately how much is your present mortgage? \$ _____ \$ _____

B12. How much are your payments every month? \$ _____ \$ _____

SCHEDULE C: CARS

- C1. Do you or your wife own a car? yes no
 IF YES C2. Do you own more than one? no, just one two three or more
- C3. Does anyone else in the family living here own a car? yes no
 IF YES C4. Who else owns a car? _____
- C5. (Total number of cars owned in the spending unit.) none one two three

(ASK THE REMAINING QUESTIONS ONLY ABOUT CARS OWNED BY MEMBERS OF THIS SU)

		First car	Second car
IF OWNS	C6. Did you buy your car new or used?	<input type="checkbox"/> new <input type="checkbox"/> used	<input type="checkbox"/> new <input type="checkbox"/> used
	C7. What make and year model is it?		
	C8. Is it a sedan, station wagon, convertible, or what?		
	C9. What year did you buy it?		
IF BOUGHT AFTER JULY 31, 1957	C10. In what month did you buy it?		
	C11. Do you use this car in your work--other than driving to work and back?	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no
IF YES	C12. Of the total mileage you put on this car, what part was for business purposes?		
	C13. Were any of the expenses of this car met out of business funds or covered by a mileage or car allowance?	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no
	C14. Did you trade in or sell a car when you bought your present car?	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no
IF YES	C15. What make and year model was it?		
	C16. What year did you buy it?		

C. (CONTINUED)

IF BOUGHT AFTER JULY 31, 1957	HAND COPY OF GREEN FORM TO R AND FILL OUT BELOW	First car		Second car	
		1957	1958	1957	1958
	About the car you purchased in 1957 (1958):				
	Cost:				
	How much did you pay for it, not counting financing charges? C17.	\$ _____		\$ _____	
	How much did you get from trade-in or sale of your old car? C18.	\$ _____		\$ _____	
	How much did you pay in cash? C19.	\$ _____		\$ _____	
	How much did you borrow or finance, not counting financing charges? C20.	\$ _____		\$ _____	
	(IF NO BORROWING, SKIP TO QUESTION C27.)				
	Financing:				
	How much are your payments and how often do you make them? C21.	\$ _____ per _____		\$ _____ per _____	
	How many payments did you promise to make altogether? C22.				
	How many payments have you made already? C23.				
	How many payments do you have left to make? C24.				
	How much is your final payment? C25.	\$ _____		\$ _____	
	How much do you have left to pay including financing charges? C26.	\$ _____		\$ _____	

ASK ABOUT ALL CARS EXCEPT CARS BOUGHT ON CREDIT AFTER JULY 31, 1957	C. 27. Do you owe any money on your car now?	<input type="checkbox"/> yes	<input type="checkbox"/> no	<input type="checkbox"/> yes	<input type="checkbox"/> no
	IF YES C28. How much are your payments?	\$ _____		\$ _____	
	C29. How many payments do you have left to make?	per _____		per _____	
	C30. Is the final payment the same size (as the others)?	<input type="checkbox"/> yes	<input type="checkbox"/> no	<input type="checkbox"/> yes	<input type="checkbox"/> no
	IF NO C30a. How much is the final payment?	\$ _____		\$ _____	
	C31. Now, how much do you have left to pay, including financing charges?	\$ _____		\$ _____	

ASK EVERYONE

C32. Did you sell, give away, or scrap a car after July 31, 1957, that we haven't talked about?

 no sold gave away scrapped

IF SOLD, GAVE AWAY, OR SCRAPPED C33. What was its make and year model? _____

C34. How much did you get for it? \$ _____

SCHEDULE D: OTHER DURABLES

D1. How about large items for the home -- did you buy anything of this sort after July 31, 1957 -- furniture, a refrigerator, stove, washing machine, television set, air conditioner, household appliances, and so on?

nothing IF YES D2. What did you buy? (Enter answers below.)

D3. Anything else?

Description of purchase:			
D4. How much did it cost, not counting financing charges?	\$ _____	\$ _____	\$ _____
D5. Was there a trade-in or did you sell your old one or what?	<input type="checkbox"/> T-I <input type="checkbox"/> S <input type="checkbox"/> No	<input type="checkbox"/> T-I <input type="checkbox"/> S <input type="checkbox"/> No	<input type="checkbox"/> T-I <input type="checkbox"/> S <input type="checkbox"/> No
IF <u>TRADE-IN</u> OR <u>SALE</u> D6. How much did you get for it?	\$ _____	\$ _____	\$ _____
D7. Did you buy it on credit or pay cash or what?	<input type="checkbox"/> credit <input type="checkbox"/> cash	<input type="checkbox"/> credit <input type="checkbox"/> cash	<input type="checkbox"/> credit <input type="checkbox"/> cash
D8. Do you still have anything left to pay?	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no
IF <u>YES</u> D9. How much are the payments?	\$ _____ per _____	\$ _____ per _____	\$ _____ per _____
D10. How many more payments do you have left to make?			
D11. How much do you have left to pay?	\$ _____	\$ _____	\$ _____

D12. Do you still have payments left to make on things you bought for your home before July 31, 1957?

yes no

INTERVIEWER: IF NECESSARY REPEAT LIST OF ITEMS IN QUESTION D1.

IF <u>YES</u>	D13. What did you buy?			
	D14. How much are your payments?	\$ _____ per _____	\$ _____ per _____	\$ _____ per _____
	D15. How many payments do you have left to make?			
	D16. How much do you have left to pay?	\$ _____	\$ _____	\$ _____

SCHEDULE E: PERSONAL DEBT

We've asked about some of your debts; now we'd like to fill out the rest of the picture.

E1. Do you people owe any money on anything else you have bought? yes no

<u>IF YES</u>	E2. What did you buy?			
	E3. Did you agree to make regular payments?	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no
<u>IF YES</u>	E4. How much are the payments?	\$ _____ per _____	\$ _____ per _____	\$ _____ per _____
	E5. How many payments do you have left to make?			
	E6. How much do you have left to pay?	\$ _____	\$ _____	\$ _____
<u>IF NO</u>	E7. What are the arrangements for paying it off?			
	<u>IF NOT CLEAR</u> E8. Is this the kind of arrangement where you pay the whole amount at once, or did you arrange to make several payments?			
	E9. How much do you have left to pay?	\$ _____	\$ _____	\$ _____
	E10. Do you owe money on anything else you have bought?	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no

IF YES: Ask E2 to E9.

E11. Do you owe any money to a doctor, dentist, or hospital for medical services? yes no

IF YES E12. How much? \$ _____

E13. Do you owe any money at all to other private individuals or friends or relatives? yes no

IF YES E14. How much \$ _____ \$ _____

E15. Is any of this included in the amounts we've already talked about? yes no

IF YES E16. Which amounts? _____

E17. Now, not counting anything you've told me about before, do you owe any money on real estate other than your own home? yes no

IF YES E18. How much? \$ _____

E19. Do you owe any money on a policy loan from a life insurance company? yes no

IF YES E20. How much? \$ _____

E. (CONTINUED)

E21. Some people borrow cash to pay taxes or buy things or combine several small bills into one or for some other reason. Do you owe anything on loans of this kind?

yes no

IF YES E22. What was it for? _____

E23. Did you agree to make regular payments?

<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no

IF YES TO E23 E24. How much are the payments?

\$ _____ per _____	\$ _____ per _____	\$ _____ per _____
-----------------------	-----------------------	-----------------------

E25. How many payments do you have left to make?

E26. How much do you have left to pay?

\$ _____	\$ _____	\$ _____
----------	----------	----------

IF NO TO E23 E27. What are the arrangements for paying it off?

IF NOT CLEAR E28. Is this the kind of arrangement where you pay the whole amount at once or did you arrange to make several payments?

E29. How much do you have left to pay?

\$ _____	\$ _____	\$ _____
----------	----------	----------

E30. Is there anything we've missed? For instance, do you owe any other money to a bank, or a loan company, or a finance company, or a credit union, or an employee loan fund?

yes no

IF YES E31. What was it for?

E32. Did you agree to make regular payments?

<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no

IF YES E33. How much are your payments?

\$ _____ per _____	\$ _____ per _____	\$ _____ per _____
-----------------------	-----------------------	-----------------------

E34. How many payments do you have left to make?

E35. How much do you have left to pay?

\$ _____	\$ _____	\$ _____
----------	----------	----------

IF NO E36. What are the arrangements for paying it off?

E37. How much do you have left to pay?

\$ _____	\$ _____	\$ _____
----------	----------	----------

IF ANY NON-MEDICAL DEBTS IN E1 to E37

E38. Are any of the debts we have talked about for business or farm purposes?

yes no

IF YES E39. Which ones? _____

Comment _____

AN INVESTIGATION OF RESPONSE ERROR

SCHEDULE G: OCCUPATION AND INCOME

OCCU-
PATION
OF HEAD
OF SU

G1. What is your (his) occupation: (What sort of work do you do?)

(If unemployed or retired, also ask what he does when working)

G2. Do you (does he) work for yourself or someone else or what?

IF SOMEONE ELSE G3. Are you employed now? yes no

REGARDING SELF-
EMPLOYMENT
ONLY G4. Do you regularly employ people other than
yourself? yes no

G5. In the last 12 months, how many weeks did you (head) work either full time
or part time (including paid vacations and paid sick leave)? _____

IF 49
WEEKS
OR LESS

G6. Now about the _____ weeks you didn't work at all,
were you looking for work, ill or disabled, on un-
paid vacation, or what?

Reason _____ Number of Weeks

IF
WORKED
DURING
LAST 12
MONTHS

G7. When you were working during the last 12 months, did
you usually work full time or part time?

full part

IF
FARMER

G8. What were your total receipts from farming in the last
twelve months? \$ _____ A

G9. Does that include any crops you placed under commodity
credit loans?

yes no

IF NO

G10. What would your total receipts be if
we counted these in? (Correct the
figure above.)

G11. What were your total operating expenses, not
counting living expenses or income taxes? (less) \$ _____ B

G12. Does that include any investments in things that will
last for awhile, such as tractors, trucks, equipment,
or buildings?

yes no

IF YES G13. How much went for such things as that?(plus) \$ _____ C

G14. If you take this amount out of your expenses, that would leave an
income from farming for the last 12 months of (A-B) + C (equals) \$ _____ D
Does that seem about right?

ASK EVERYONE

G. (CONTINUED)

G15. Did you own a business any time in the last 12 months, or did you have a financial interest in any business enterprise? yes no IF NO, SKIP TO G33.

IF
YES

G16. What sort of business is it? _____

G17. Are you the sole owner or is it a partnership or what?

G18. Is is a corporation or an unincorporated business or do you have an interest in both kinds?

corporation

unincorporated
business

both kinds

don't know

IF CORPORATION, SKIP TO G33. (ALL OTHERS CONTINUE WITH G19.)

ASK ALL UNINCORPORATED BUSINESSMEN

G19. Did your business make a profit or a loss in the last 12 months? _____

IF
PROFIT
OR BROKE
EVEN (UNINCORPORATED
BUSINESSES
ONLY)

G20. Did you (or your wife) take anything out of the business as salary or living expenses or profit in the last 12 months? yes no

IF YES G21. How much did you take out in the last 12 months? \$ _____ A

G22. In addition, did you leave any profit in the business?

yes no

IF YES G23. How much did you leave in—I mean profits before deducting income taxes? \$ _____ B

G24. Then if we add that in, your share of the total income from the business in the last 12 months before deducting income taxes was (A + B) \$ _____ C
Is that about right?

(GO TO G29.)

IF LOSS
(UNINCORPORATED
BUSINESSES
ONLY)

G25. How much was your loss in the last 12 months? \$ _____ D

G26. Did you (or your wife) take anything out of the business as salary or living expenses in the last 12 months? yes no

IF YES G27. How much did you take out in the last 12 months? \$ _____ E

G28. If you had left that money in the business, how much profit or loss would the business have shown?

\$ _____

(GO TO G29.)

G. (CONTINUED)

ASK ALL UNINCORPORATED BUSINESSMEN

G29. Does the business owe any money for business improvements, new equipment, new buildings, and such things as that?

yes no

G30. Did you pay off any money in the last 12 months that you owed on such things as that?

yes no

IF YES

G31. Some people think of money used to pay off business debts as part of the expenses of their business and some think of it as profit used to increase the value of their business. Did you count this money you paid off in the last 12 months as a business expense or as part of profit?

business expense

profit

IF BUSINESS EXPENSE

G32. How much did you reduce your business debt during the last 12 months? \$ _____

ASK EVERYONE

(In this survey, all over the country, we are trying to get an accurate picture of people's financial situation. One thing we need to know is the income of all the people we interview. We start with wages and salaries...)

G33. How much did you (Head of SU) receive from wages and salaries in the last 12 months, that is, before deductions for taxes or anything? \$ _____

G34. In addition to this, did you have any income from bonuses, overtime, and commissions? IF YES How much was that? \$ _____

G35. Did you receive any (other) income from:

(a) professional practice yes no How much? \$ _____

(b) a trade yes no How much? \$ _____

(c) farming yes no How much? \$ _____

(d) rent yes no How much? \$ _____

(e) roomers and boarders yes no How much? \$ _____

(f) any other self-employment yes no How much? \$ _____

IF YES to any item: G36. How much was your income from _____ after allowing for expenses? \$ _____

G37. How about interest, dividends, a trust fund, royalties? \$ _____

G38. ...veteran's pension, veteran's school allotment, serviceman's family allotment? \$ _____

G39. ...retirement pay, unemployment compensation, old age pension, annuities, alimony, regular contributions, or welfare? \$ _____

G. (CONTINUED)

INCOME
OF
WIFE

G40. Did your wife have any income during the year? yes no

IF YES G41. Was it from wages, salary, a business, or what?

G42. How much did she receive?

Source (G41)				
Amount (G42)	\$	\$	\$	= \$

IF WIFE HAD WAGES OR SALARY G43. How many weeks did she work, either full time or part time? _____

G44. When she was working, did she usually work full time or part time?

full time part time

INCOME
OF
OTHER
MEMBERS
OF SU

G45. Did _____ (mention other members of SU) have any income?

yes no

IF YES G46. Who?

G47. Was it from wages, salary, a business, or what?

G48. How much was it?

Who (G46)				
Source (G47)				
Amount (G48)	\$	\$	\$	= \$

If business or farm income, enter it here (from Q. G14, G24, or G28) \$ _____

G49. Adding everything up, I get \$ _____
for the total of yourself (and your wife and children)
for the year. Is that about right?

We're interested in how your income last year compared with the year before. People's incomes often vary from year to year because of changes in wages or because more members of the family are working or someone has an extra job or for other reasons.

IF
CAN'T
SAY

G51. Was your income in 1957 larger, the same, or smaller than it was in 1956?

much larger in 1957 somewhat larger in 1957 about the same somewhat smaller in 1957 much smaller in 1957

IF
NOT
SAME

G52. Why was your income different in 1957? _____

G53. Any other reasons? _____

G54. Thinking back, what would you say your income was for the year before last (1956), for you and others in your SU? \$ _____

AN INVESTIGATION OF RESPONSE ERROR

SCHEDULE H. LIQUID ASSETS

Most of us have debts, but we also have savings, and that's what this final part is about.

IF HEAD IS
UNINCOR-
PORATED
BUSINESSMAN

H1. Do you keep the bonds and savings accounts of your business separate from your personal funds?

separate

not separate

IF
SEPARATE

H1a. Now let's talk about your personal funds.

IF NOT
SEPARATE

H1b. Then let's talk about your combined business and personal funds.

INTERVIEWER:

Hand copy of Large Yellow Form to R and explain that: "Here is a list of items we need information about for each member of your family. We would like to go over them one by one. Accuracy here is quite important, so if you have any records that would help you remember, such as bank books or check stubs, that would be very helpful."

H. (CONTINUED)

		FIRST OF THIS MONTH			
		Who owns?	How much?	Check if records looked up:	How many years has had this account?
ASK EVERYONE					
H2.	Do you or anyone in your family (SU) have any <u>REGULAR GOVERNMENT WAR BONDS OR SAVINGS BONDS</u> ?	yes <input type="checkbox"/> no <input type="checkbox"/>	\$ _____	<input type="checkbox"/>	_____
If	H3. Who owns them?	_____	\$ _____	<input type="checkbox"/>	_____
Yes	H4. How much are they worth? (face value)?	_____	\$ _____	<input type="checkbox"/>	_____
H5.	Do you or anyone in your family (SU) have any U. S. <u>GOVERNMENT BONDS OTHER THAN SAVINGS BONDS</u> , I mean the kind you can sell to someone else?	yes <input type="checkbox"/> no <input type="checkbox"/>	\$ _____	<input type="checkbox"/>	_____
If	H6. Who owns them?	_____	\$ _____	<input type="checkbox"/>	_____
Yes	H7. How much are they worth? (face value)?	_____	\$ _____	<input type="checkbox"/>	_____
H8.	Do you or anyone in your family (SU) have any <u>CHECKING ACCOUNTS IN BANKS</u> ?	yes <input type="checkbox"/> no <input type="checkbox"/>	\$ _____	<input type="checkbox"/>	_____
If	H9. How many checking accounts do you people have?	_____	\$ _____	<input type="checkbox"/>	_____
Yes	H10. Who has them?	_____	\$ _____	<input type="checkbox"/>	_____
	H11. How much do you have in each (first of this month)?	_____	\$ _____	<input type="checkbox"/>	_____
	H12. How many years have you had each account?	_____	\$ _____	<input type="checkbox"/>	_____
H13.	Do you or anyone in your family (SU) have any <u>SAVINGS ACCOUNTS IN BANKS</u> ?	yes <input type="checkbox"/> no <input type="checkbox"/>	\$ _____	<input type="checkbox"/>	_____
If	H14. How many savings accounts in banks do you people have?	_____	\$ _____	<input type="checkbox"/>	_____
Yes	H15. Who owns each one?	_____	\$ _____	<input type="checkbox"/>	_____
	H16. How much do you have in each (first of this month)?	_____	\$ _____	<input type="checkbox"/>	_____
	H17. How many years have you had each account?	_____	\$ _____	<input type="checkbox"/>	_____
H18.	Do you or anyone in your family (SU) have any <u>SAVINGS ACCOUNTS IN SAVINGS AND LOAN ASSOCIATIONS</u> ?	yes <input type="checkbox"/> no <input type="checkbox"/>	\$ _____	<input type="checkbox"/>	_____
If	H19. How many of these accounts do you people have?	_____	\$ _____	<input type="checkbox"/>	_____
Yes	H20. Who owns each one?	_____	\$ _____	<input type="checkbox"/>	_____
	H21. How much do you have in each (first of this month)?	_____	\$ _____	<input type="checkbox"/>	_____
	H22. How many years have you had each account?	_____	\$ _____	<input type="checkbox"/>	_____
H23.	Do you or anyone in your family (SU) have any <u>SAVINGS ACCOUNTS IN CREDIT UNIONS</u> ?	yes <input type="checkbox"/> no <input type="checkbox"/>	\$ _____	<input type="checkbox"/>	_____
If	H24. How many of these accounts do you people have?	_____	\$ _____	<input type="checkbox"/>	_____
Yes	H25. Who owns each one?	_____	\$ _____	<input type="checkbox"/>	_____
	H26. How much do you have in each (first of this month)?	_____	\$ _____	<input type="checkbox"/>	_____
	H27. How many years have you had each?	_____	\$ _____	<input type="checkbox"/>	_____

Now we'd like to know how this compares with the first of the month six months ago.

Finally we'd like to know how much you had a year ago from the first of this month.

(INTERVIEWER: Go through questions H2 to H24 prefacing each with "Six months ago from the first of this month" and change to past tense) and then ask the same series prefacing each with a year ago from the first of this month.

AN INVESTIGATION OF RESPONSE ERROR

H. (CONTINUED)

THE FIRST OF THE MONTH SIX MONTHS AGO					THE FIRST OF THE MONTH A YEAR AGO				
Who owns		How much	Check if records looked up:	How many years has had this account?	Who owns		How much	Check if records looked up:	How many years has had this account?
<input type="checkbox"/> yes	<input type="checkbox"/> no	\$ _____	<input type="checkbox"/>	_____	<input type="checkbox"/> yes	<input type="checkbox"/> no	\$ _____	<input type="checkbox"/>	_____
		\$ _____	<input type="checkbox"/>	_____			\$ _____	<input type="checkbox"/>	_____
		\$ _____	<input type="checkbox"/>	_____			\$ _____	<input type="checkbox"/>	_____
		\$ _____	<input type="checkbox"/>	_____			\$ _____	<input type="checkbox"/>	_____
<input type="checkbox"/> yes	<input type="checkbox"/> no	\$ _____	<input type="checkbox"/>	_____	<input type="checkbox"/> yes	<input type="checkbox"/> no	\$ _____	<input type="checkbox"/>	_____
		\$ _____	<input type="checkbox"/>	_____			\$ _____	<input type="checkbox"/>	_____
		\$ _____	<input type="checkbox"/>	_____			\$ _____	<input type="checkbox"/>	_____
		\$ _____	<input type="checkbox"/>	_____			\$ _____	<input type="checkbox"/>	_____
<input type="checkbox"/> yes	<input type="checkbox"/> no	\$ _____	<input type="checkbox"/>	_____	<input type="checkbox"/> yes	<input type="checkbox"/> no	\$ _____	<input type="checkbox"/>	_____
		\$ _____	<input type="checkbox"/>	_____			\$ _____	<input type="checkbox"/>	_____
		\$ _____	<input type="checkbox"/>	_____			\$ _____	<input type="checkbox"/>	_____
		\$ _____	<input type="checkbox"/>	_____			\$ _____	<input type="checkbox"/>	_____
<input type="checkbox"/> yes	<input type="checkbox"/> no	\$ _____	<input type="checkbox"/>	_____	<input type="checkbox"/> yes	<input type="checkbox"/> no	\$ _____	<input type="checkbox"/>	_____
		\$ _____	<input type="checkbox"/>	_____			\$ _____	<input type="checkbox"/>	_____
		\$ _____	<input type="checkbox"/>	_____			\$ _____	<input type="checkbox"/>	_____
		\$ _____	<input type="checkbox"/>	_____			\$ _____	<input type="checkbox"/>	_____
<input type="checkbox"/> yes	<input type="checkbox"/> no	\$ _____	<input type="checkbox"/>	_____	<input type="checkbox"/> yes	<input type="checkbox"/> no	\$ _____	<input type="checkbox"/>	_____
		\$ _____	<input type="checkbox"/>	_____			\$ _____	<input type="checkbox"/>	_____
		\$ _____	<input type="checkbox"/>	_____			\$ _____	<input type="checkbox"/>	_____
		\$ _____	<input type="checkbox"/>	_____			\$ _____	<input type="checkbox"/>	_____

Total first of this month \$ _____ Total six months ago \$ _____ Total a year ago \$ _____

H. (CONTINUED)

ASK EVERYONE EXCEPT THOSE WITH NO ASSETS NOW OR A YEAR AGO

H28. Now if we add up these figures, you had \$_____ in bonds and bank accounts on the first of this month, and on the first of the month six months ago you had \$_____ . That means you had \$_____ more (less) the first of this month, is that right?

yes no _____

H29. Now if we add up the figures for the first of the month a year ago, you had \$_____ in bonds and bank accounts. Since you had \$_____ on the first of this month that means you had \$_____ more (less) the first of this month, is that right?

yes no _____

IF AT
LEAST
\$1,000
MORE
NOW

H30. Is there any special reason why your savings have gone up by that amount?

IF AT
LEAST
\$1,000
LESS
NOW

H31. What did you use the money for? _____

SCHEDULE Y: ATTITUDE QUESTIONS

PLEASE ASK THESE QUESTIONS EXACTLY AS THEY ARE WORDED

We're interested in whether people feel that information about their income, savings, and things such as that, is too personal to discuss, or whether they sometimes talk about them.

Y1. How about you—do your best friends know what your income is or not? _____

Y2. How about savings—do you ever talk about that with close friends? _____

Y3. As you know, many people buy things on the instalment plan these days. Do you think it is a good idea or a bad idea to buy things on the instalment plan?

Y3a. What do you have in mind? _____

Y. (CONTINUED)

Now I have here some questions that are a little different. I'm going to read you some sentences that we've started. We'd like you to give us a few words to finish the sentences. Don't bother to think out your answers—just say what occurs to you.

Y4. The best thing to do with money is _____

Y5. When his friend asked him for a loan, he _____

Y6. Keeping records of money spent is _____

Y7. Giving gifts is _____

Y8. As he looked back over his record of the money he had spent _____

Y9. When he was asked to contribute to the Community Fund, he _____

Y10. When he didn't know how much money he had left, he _____

Y11. People who budget their money are _____

Y12. Buying little luxuries is _____

Y13. Making monthly payments is _____

Y14. With money you can _____

Y15. When all his money was gone, he _____

Y16. As long as you have money _____

Y17. Budgeting money is _____

Y18. When his friends deserted him, his money _____

Y19. He who controls the purse strings _____

GO TO BACKGROUND DATA

AN INVESTIGATION OF RESPONSE ERROR

SCHEDULE J: INFORMATION ABOUT SPENDING UNIT INTERVIEWED

J1. Do you have any relatives who do not live with you and who are dependent on you for more than half of their living?

none one two three

J2. Are you married? married single Other _____

IF MARRIED AND LIVING TOGETHER

J2a. How long have you been married? (check nearest year)

not applicable 1 or less 2 3 4 5-9 10-20 over 20

J3. AGE OF HEAD OF SPENDING UNIT: 18-20 21-24 25-29 30-34 35-39 40-44
 45-49 50-54 55-59 60-64 65 and over

J4. EDUCATION OF HEAD: How many grades of school have you (has he) finished?

1 2 3 4 5 6 7 8 9 10 11 12

IF MORE THAN 8

J5. Have you (has he) had other schooling? yes no

IF YES J6. What other schooling have you (has he) had?

(Type of schooling) _____
(College, Secretarial, Business, etc.)

IF ATTENDED COLLEGE J7. Do you have (has he) a college degree?

yes no

J8. SEX OF HEAD OF SPENDING UNIT: man woman

J9. SEX OF RESPONDENT: man woman

J10. RACE: white negro other (specify) _____

J11. LENGTH OF INTERVIEW: _____

J12. NUMBER OF CALLS: _____

J13. ASIDE FROM LIQUID ASSETS, FOR WHAT DOLLAR ITEMS WERE RECORDS LOOKED UP? _____

J14. WHO WAS PRESENT DURING THE INTERVIEW? _____

REACTION TO INTERVIEW

ASK AT VERY END OF INTERVIEW AFTER DATA SHEET

One of our problems in studies such as this is to get information which is accurate. I'm interested in how you think other people will react to this interview and how accurately they can and will give us information.

1. Do you think that most people will give us accurate answers to questions such as how much they have in their savings accounts? yes no

1a. What do you have in mind? _____

2. How about income, do you think that most people will give us accurate information about that? yes no

2a. What do you have in mind? _____

3. Do you think that most people will think this study is important and worthwhile or a waste of time? _____

3a. Why? _____

4. Do you think most people will enjoy the interview? yes no

4a. Why? _____

THUMBNAIL SKETCH

QUESTIONNAIRE B, FIRST FIELD EXPERIMENT

Interviewer: _____ Interview No.: _____ Date: _____

INFORMATION ABOUT THE DWELLING UNIT

DO NOT ASK THESE QUESTIONS UNTIL THE END OF THIS QUESTIONNAIRE							
1	2	3	4	5	6	7	8
First Name of DU member 18 years and over who lives here	Relationship of DU member to the head of the DU	Family Unit No.	Does he (she) usually receive \$15 or more per week from any source?	IF YES Does he (she) keep his finances separate?	IF YES Does he (she) contribute less than one-half of his income?*	Spending Unit No.	Indicate respondent by check
	HEAD OF DU	1	-	-	-	1	

ASK WHEN FILLING OUT THIS BOX

9. In this house (apartment), then, there are _____ people 18 or over, is that right?

* If he (she) contributed less than one-half, he (she) is a separate spending unit. If no, he (she) is not a separate spending unit. The main spending unit should be numbered "1." Please number all spending units.

ASK ABOUT SU INTERVIEWED

10. Do you (SU covered by this interview) have any children under 18? yes no

IF 11. How many? _____

YES 12. How old are they? _____

13. What are their first names? _____

A. Income for the last twelve months

Husband's income (head's income) \$ _____
 Other income \$ _____
 Total \$ _____

B. Large expenditures in last twelve months

	Item	Price	Any still left to pay?
a			
b			
c			
d			

C. Savings

(1) Savings Accounts

	Type of account (single or joint)	In whose name?	Principal purpose	Holdings		
				First of this month	Six months earlier	Twelve months earlier
a						
b						
c						
d						

(2) U. S. Government Bonds

	In whose name	Principal purpose (if volunteered)	Holdings		
			First of this month	Six months earlier	Twelve months earlier
a					
b					
c					
d					

D. Debts (if any not shown under B)

	Origin of debt	Type of lender	Amount owed now	Amount owed six months ago	Amount owed a year ago
a					
b					
c					
d					

E. Other major transactions, such as purchase, sale of real estate (in past twelve months)

Type of transaction _____	
Amount of money needed _____	Amount of money received _____
Sources of funds _____	Where the money went _____
(where the money came from) _____	_____
_____	_____

F. Business owners

Type of business _____

Amount of new money
put into the business
in past twelve months
(if any) _____

BACKGROUND DATA

SU
compo-
sition

1. INTERVIEWER: Determine the SU composition if you have not already done so during the interview and fill in listing box on face sheet under information about the dwelling unit. Be sure to check respondent.

Edu-
cation
of R

2. How many grades of school have you finished? 1-6 7-8 9-12

Have you had other schooling? yes no

What other schooling have you had? (type) _____

Age of R

3. 18-24 25-34 35-44 45-54 55-64 65 and over

Sex of R

4. M F

Marital
status
of R

5. Single Married

Length of
residence

6. How long have you been living at this address? _____

Race

7. White Negro Other (Specify) _____

REACTION TO INTERVIEW

ASK AT VERY END OF INTERVIEW AFTER DATA SHEET

One of our problems in studies like this is to get information which is accurate. I'm interested in how you think other people will react to this interview and how accurately they can and will give us information.

1. Do you think that most people will give us accurate answers to questions about their income? yes no
- 1a. What do you have in mind? _____
2. How about savings accounts and things like that — do you think that most people will give us accurate information about them? yes no
- 2a. What do you have in mind? _____
3. Do you think that most people will think this study is important and worthwhile or a waste or time? _____
- 3a. Why? _____
4. Do you think most people will enjoy the interview? yes no
- 4a. Why? _____

SCHEDULE Y: ATTITUDE QUESTIONS

PLEASE ASK THESE QUESTIONS EXACTLY AS THEY ARE WORDED

We're interested in whether people feel that information about their income, savings, and things such as that, is too personal to discuss, or whether they sometimes talk about them.

Y1. How about you—do your best friends know what your income is or not? _____

Y2. How about savings—do you ever talk about that with close friends? _____

Y3. As you know many people buy things on the instalment plan these days. Do you people think it is a good idea or a bad idea to buy things on the instalment plan? _____

Y3a. What do you have in mind? _____

Y. (CONTINUED)

Now I have here some questions that are a little different. I'm going to read you some sentences that we've started. We'd like you to give us a few words to finish the sentences. Don't bother to think out your answers—just say what occurs to you.

- Y4. The best thing to do with money is _____
- Y5. When his friend asked him for a loan, he _____
- Y6. Keeping records of money spent is _____
- Y7. Giving gifts is _____
- Y8. As he looked back over his record of the money he had spent _____
- Y9. When he was asked to contribute to the Community Fund, he _____
- Y10. When he didn't know how much money he had left, he _____
- Y11. People who budget their money are _____
- Y12. Buying little luxuries is _____
- Y13. Making monthly payments is _____
- Y14. With money you can _____
- Y15. When all his money was gone, he _____
- Y16. As long as you have money _____
- Y17. Budgeting money is _____
- Y18. When his friends deserted him, his money _____
- Y19. He who controls the purse strings _____

REINTERVIEW QUESTIONNAIRE, FIRST FIELD EXPERIMENT

Interviewer's name: _____

Interview number: _____ Date: _____

Length of interview: _____

LIST BELOW ALL ADULTS LIVING IN THE DWELLING UNIT. (List all persons 18 and over and everyone who is married, regardless of age.)

Relationship to head	Sex	Family Unit No.	Indicate respondent
1. Head		1	
2.			
3.			
4.			
5.			
6.			
7.			

ASK ABOUT THIS FAMILY

1. We'd like to know whether there have been any changes in your family during the last year. Is there anyone living here now who wasn't here a year ago?

yes no

IF YES 2. Who? _____

3. Was there anyone living with you a year ago who isn't here now? yes no

IF YES 4. Who was it? _____

A. CURRENT ECONOMIC SITUATION

- A1. We are interested in how people are getting along financially these days. Would you say that you and your family are better off or worse off financially than you were a year ago?

- A2. Looking back over the last six months, did things work out pretty much as you expected financially, or did anything unexpected happen?

- A3. Now looking ahead, do you think that a year from now you people will be better off financially, or worse off, or just about the same?

B. HOUSING

B1. About how long have you people lived here at this address? _____

B2. Would you say that this home is satisfactory for your needs or unsatisfactory or what?

B3. What do you like most about it? _____

B4. What do you like least about it? _____

B5. Do you feel that you have settled down to stay in this house or that you may not stay very long?

IF MAY MOVE B6. Under what circumstances do you think you might move?

C. CHILDREN

C1. How many children do you have? _____

C2. How old are they? _____

IF ANY
CHILDREN
16 OR
UNDER

C3. How much education do you expect (them) to have before (they) stop going to school?

IF MAY
GO TO
COLLEGE

C4. How do you expect (their) college education will be financed?

IF ANY
CHILDREN
17 OR
OVER

C5. What are (they) doing now? _____

IF IN
HIGH
SCHOOL

C6. How much education do you expect (them) to have before (they) stop going to school?

IF MAY
GO TO
COLLEGE

C7. How do you expect (their) college education will be financed?

C. (CONTINUED)

IF ANY
CHILDREN
NOW IN
COLLEGE

C8. How is their college education being financed?

C9. Do you contribute out of your current income or out of some other funds? (What are they?)

IF
PARENT
IS PAYING

IF ANY
CHILDREN
NOT NOW
IN
SCHOOL

C10. How much education did they have before leaving school?

IF
ANY
COLLEGE

C11. How was their college education financed?

IF
NOT
CLEAR

C11a. Did you contribute out of your current income or out of some other funds?

D. FINANCIAL MANAGEMENT — THIS FAMILY

Now I have some questions about how people handle their finances.

IF
MARRIED
COUPLE

D1. All of us have bills which come in every month or every so often. In some families the husband pays all the bills, in some the husband pays some and the wife others, and sometimes the wife pays the bills. How is it done in your family?

D2. Do you have a system where one person gets a certain amount regularly and pays for certain things out of that or do you keep all the money together or what?

ASK EVERYONE

D3. Do you plan to have your bills stay about the same from month to month or do they vary a good deal, depending on what you buy?

D4. We all have the problem of living within our incomes and seeing that we do not run out of money before we have more money coming in. How do you handle this problem?

D. (CONTINUED)

D5. Do you try to plan in advance how much money you will spend on different things?

 yes

 no

IF D6. What types of things do you plan for?
YES How specific do you make your plans—do they cover each individual expenditure or just general categories or what?

D7. How far in advance do you try to plan?

D8. Some people keep complete records of all the money they spend while other people do not.

D8a. Do you think it is necessary to keep records?

D8b. Do you keep any records of what you have spent? (What kind of records do you keep?)

D9. Suppose a family has some money over and above what they need for their expenses. What do you think would be the wisest thing for them to do with it nowadays — put it in a savings account, buy government savings bonds, invest it in real estate, buy common stock, or what?

D9a. Why do you think this is best? _____

E. FINANCIAL MANAGEMENT — IN GENERAL

- E1. Thinking of the way your parents managed their finances, would you say that they planned ahead how they would spend their money more carefully than you or do you plan ahead more or what?

- E2. How about keeping control over small expenditures — would you say that your parents kept closer control over small expenditures than you do or do you keep closer control or what?

- E3. Thinking of a young couple just starting out in life, what would you advise them about handling their money?

E3a. IF "BUDGET" NOT MENTIONED, THEN ASK

How about a budget or planning their expenditures in advance?

- E3b. Why do you say so?

F. CHECKING AND SAVINGS ACCOUNTS

F1. Do you have a checking account in your family? yes no

IF HAS
CHECKING
ACCOUNT

F2. Do you have more than one account in the family?

one two three _____

IF ONE
ACCOUNT

F3. Do you put all your income in the checking account or how does this work?

IF MORE
THAN ONE
ACCOUNT

F4. Do you use the different accounts for different purposes? (In what way?)

F5. Do you divide your income evenly between the accounts, or how do you work it?

F6. Do you have any savings accounts in your family? yes no

IF HAS
ANY
SAVINGS
ACCOUNTS

F7. Do you have more than one account in the family?

one two three four _____

IF MORE
THAN ONE
ACCOUNT

F8. Do you use the different accounts for different purposes? (In what way?)

F. (CONTINUED)

ASK ABOUT EACH SAVINGS ACCOUNT

F9. Are you keeping the money in this account for any special purpose? (What is it?)				
F10. Do you deposit money regularly or occasionally or what?				
<u>IF MAKES DEPOSITS</u> F11. About how often do you make deposits?				
F12. Do you ever make withdrawals from this account?				
<u>IF YES</u> F13. What do you use the money for?				
<u>IF NO</u> F14. Under what circumstances would you draw money out?				

G. INFORMATION ABOUT FAMILY INTERVIEWED

G1. Total family income in 1958:

Under \$1,000	\$1,000-1,999	\$2,000-2,999	\$3,000-3,999
\$4,000-4,999	\$5,000-5,999	\$6,000-7,499	\$7,500-9,999
\$10,000 - 14,999	\$15,000 - 19,999	\$20,000 or more	

G2. Checking accounts for this family:

no one in family has checking account	one checking account in family
two checking accounts in family	three or more checking accounts in family

	Is this a joint account or in name of one person?	In whose name is the account? (Check as many as apply)	Approximate balance, March 1, 1959	Approximate balance
First account	<input type="checkbox"/> joint <input type="checkbox"/> one person	<input type="checkbox"/> head <input type="checkbox"/> wife <input type="checkbox"/> other	\$ _____	\$ _____
Second account	<input type="checkbox"/> joint <input type="checkbox"/> one person	<input type="checkbox"/> head <input type="checkbox"/> wife <input type="checkbox"/> other	\$ _____	\$ _____
Third account	<input type="checkbox"/> joint <input type="checkbox"/> one person	<input type="checkbox"/> head <input type="checkbox"/> wife <input type="checkbox"/> other	\$ _____	\$ _____

G2a. Have you closed out any checking accounts in the last year? _____

G3. Savings accounts of this family:

no one in family has savings account	one savings account in family
two savings accounts in family	three or more savings accounts in family

	Is this a joint account or in name of one person?	In whose name is the account? (Check as many as apply)	Approximate balance, March 1, 1959	Approximate balance
First account	<input type="checkbox"/> joint <input type="checkbox"/> one person	<input type="checkbox"/> head <input type="checkbox"/> wife <input type="checkbox"/> other	\$ _____	\$ _____
Second account	<input type="checkbox"/> joint <input type="checkbox"/> one person	<input type="checkbox"/> head <input type="checkbox"/> wife <input type="checkbox"/> other	\$ _____	\$ _____
Third account	<input type="checkbox"/> joint <input type="checkbox"/> one person	<input type="checkbox"/> head <input type="checkbox"/> wife <input type="checkbox"/> other	\$ _____	\$ _____

G3a. Have you closed out any savings accounts in the last year? _____

G. (CONTINUED)

G4. U. S. Government savings bonds of this family:

family has no savings bonds

family does have bonds, present value under \$1,000

family does have bonds, present value \$1,000 or above

G5. Ownership of common or preferred stock (exclusive of stock in family business or other privately traded stock):

family owns no common or preferred stock

family owns common or preferred stock, present value under \$1,000

family owns common or preferred stock, present value \$1,000 or above

COMMENTS ON COMPARISON WITH FALL INTERVIEW

Checking Accounts

Account	Final Estimate of Fall Balance	Comments
---------	-----------------------------------	----------

Savings Accounts

Account	Final Estimate of Fall Balance	Comments
---------	-----------------------------------	----------

U.S. Government Bonds

Account	Final Estimate of Fall Balance	Comments
---------	-----------------------------------	----------

H. OCCUPATION OF HEAD

H1. What is your (head's) occupation? (What sort of work do you do?)

(If unemployed or retired, also ask what he does when working.)

H2. Do you work for yourself or someone else or what? _____

(If other adults in family)

H3. Is there anyone else in the family who is working or looking for work?

(Ask about each adult who works)

H3a. What sort of work does (he) do? _____

H4. Age of head of family (years):

18-24	25-29	30-34	35-39
40-44	45-49	50-54	55-59
60-64	65-69	70 or over	

H5. Sex of head of family: man woman

H6. Number of adults who last year worked either full time or part time?

nobody worked	one person worked	two people worked
three or more people worked		

QUESTIONNAIRE, SECOND FIELD EXPERIMENT

Interviewer's name _____

Interview number _____ Date _____

Length of interview _____

LIST BELOW ALL ADULTS LIVING IN THE DWELLING UNIT. (List all persons 18 and over and everyone who is married, regardless of age.)

Relationship to head	Sex	Family Unit No.	Indicate respondent
1. Head		1	
2.			
3.			
4.			
5.			
6.			
7.			

ASK ABOUT THIS FAMILY

1. We'd like to know whether there have been any changes in your family during the last year. Is there anyone living with you now who wasn't here a year ago?

yes no

IF YES 1a. Who? _____

2. Was there anyone living with you a year ago who isn't here now?

yes no

IF YES 2a. Who was it? _____

THUMBNAIL SKETCHMAIL ADDRESS OF R:

(a) Income	very accurate	reasonably accurate	somewhat inaccurate	very inaccurate
(b) Savings accounts	very accurate	reasonably accurate	somewhat inaccurate	very inaccurate
(c) Cash loans	very accurate	reasonably accurate	somewhat inaccurate	very inaccurate
(d) Instalment purchases	very accurate	reasonably accurate	somewhat inaccurate	very inaccurate

COMMENTS:

AN INVESTIGATION OF RESPONSE ERROR

A. CURRENT ECONOMIC SITUATION

- A1. We are interested in how people are getting along financially these days. Would you say that you and your family are better off or worse off financially than you were a year ago?

- A2. Looking back over the last six months, did things work out pretty much as you expected financially, or did anything unexpected happen?

- A3. Now looking ahead, do you think that a year from now you people will be better off financially or worse off or just about the same?

- A4. As you know, many people buy things on the instalment plan these days. Do you think it is a good idea or a bad idea to buy things on the instalment plan?

- A4a. What do you have in mind? _____

B. HOUSING

B1. About how long have you people lived here at this address? _____

B2. Do you own your home or pay rent or what?

owns or is buying

pays rent

neither owns nor rents

B3. Would you say that this home is satisfactory for your needs or unsatisfactory or what?

B4. What do you like most about it? _____

B5. What do you like least about it? _____

C. CHILDREN

C1. How many children do you have? _____

C2. How old are they? _____

IF ANY
CHILDREN
16 OR
UNDER

C3. How much education do you expect (them) to have before (they) stop going to school? _____

IF MAY
GO TO
COLLEGE

C4. How do you expect (their) college education will be financed?

IF
NOT
CLEAR

C4a. At the present time do you have any money set aside specially for their college education?

IF ANY
CHILDREN
17 OR
OVER

C5. What are (they) doing now? _____

IF IN
HIGH
SCHOOL

C6. How much education do you expect (them) to have before (they) stop going to school? _____

IF MAY
GO TO
COLLEGE

C7. How do you expect (their) college education will be financed?

IF
NOT
CLEAR

C7a. At the present time do you have any money set aside specially for their college education?

AN INVESTIGATION OF RESPONSE ERROR

D. FINANCIAL MANAGEMENT — THIS FAMILY

Now I have some questions about how people handle their finances.

IF
MARRIED
COUPLE

D1. All of us have bills which come in every month or every so often. In some families the husband pays all the bills, in some the husband pays some and the wife others, and sometimes the wife pays the bills. How is it done in your family?

IF R IS D2a. In your family, does your wife have a certain amount of HUSBAND money to cover the household expenses?

IF R IS D2b. Do you have a certain amount of money to cover the house- WIFE hold expenses?

D3. How about for other things—does each person get an allowance and pay for certain things out of that or do you each take money when you need it?

D. (CONTINUED)

ASK EVERYONE

- D4. Some people try to set aside in advance so much money for food, so much for rent, so much for different bills, and so much for saving. Do you try to do any planning like that?

IF
MAKES
ANY
PLANS

- D5. What kind of plans do you make? _____

- D6. How far in advance do you try to plan? _____

- D7. Some people keep complete records of all the money they spend while other people do not. Do you keep any records of what you have spent?

IF KEEPS
RECORDS

- D7a. What kind of records do you keep? _____

E. FINANCIAL MANAGEMENT—IN GENERAL

- E1. Thinking of the way your parents managed their finances, would you say that they planned ahead how they would spend their money more carefully than you or do you plan ahead more or what?

- E2. How about keeping control over small expenditures—would you say that your parents kept closer control over small expenditures than you do or do you keep closer control or what?

- E3. Thinking of a young couple just starting out in life, if they asked you for advice, what would you advise them about handling their money?

E3a. IF "BUDGET" NOT SPECIFICALLY MENTIONED, THEN ASK

Would you advise a young couple to keep a budget and plan their expenditures in advance?

- E3b. Why do you say so? _____

F. ATTITUDES TOWARD BORROWING

Now I have some questions about the different purposes for which people borrow money or use pay-later plans.

1. How do you feel about borrowing or using credit—to cover the expense of a vacation trip? Do you feel it is

usually
a good
idea?

sometimes
a good
idea?

never
a good
idea?

2. How do you feel about borrowing or using credit—to pay taxes? Do you feel it is

usually
a good
idea?

sometimes
a good
idea?

never
a good
idea?

3. How do you feel about borrowing or using credit—to purchase jewelry? Do you feel it is

usually
a good
idea?

sometimes
a good
idea?

never
a good
idea?

4. How do you feel about borrowing or using credit—for educational purposes? Do you feel it is

usually
a good
idea?

sometimes
a good
idea?

never
a good
idea?

5. How do you feel about borrowing or using credit—to cover expenses due to illness? Do you feel it is

usually
a good
idea?

sometimes
a good
idea?

never
a good
idea?

6. How do you feel about borrowing or using credit—to pay bills that have piled up? Do you feel it is

usually
a good
idea?

sometimes
a good
idea?

never
a good
idea?

7. How do you feel about borrowing or using credit—to purchase a car? Do you feel it is

usually
a good
idea?

sometimes
a good
idea?

never
a good
idea?

8. How do you feel about borrowing or using credit—to purchase furniture? Do you feel it is

usually
a good
idea?

sometimes
a good
idea?

never
a good
idea?

F. (CONTINUED)

- F2a. How about your friends—how do you think they would feel about using credit—to cover the expense of a vacation trip? Would they feel it is
- | | | |
|----------------------------|------------------------------|--------------------------|
| usually
a good
idea? | sometimes
a good
idea? | never
a good
idea? |
|----------------------------|------------------------------|--------------------------|
- b. How do you think your friends would feel about using credit—to pay taxes? Would they feel it is
- | | | |
|----------------------------|------------------------------|--------------------------|
| usually
a good
idea? | sometimes
a good
idea? | never
a good
idea? |
|----------------------------|------------------------------|--------------------------|
- c. How do you think your friends would feel about using credit—to purchase jewelry? Would they feel it is
- | | | |
|----------------------------|------------------------------|--------------------------|
| usually
a good
idea? | sometimes
a good
idea? | never
a good
idea? |
|----------------------------|------------------------------|--------------------------|
- d. How do you think your friends would feel about using credit—for educational purposes? Would they feel it is
- | | | |
|----------------------------|------------------------------|--------------------------|
| usually
a good
idea? | sometimes
a good
idea? | never
a good
idea? |
|----------------------------|------------------------------|--------------------------|
- e. How do you think your friends would feel about using credit—to cover expenses due to illness? Would they feel it is
- | | | |
|----------------------------|------------------------------|--------------------------|
| usually
a good
idea? | sometimes
a good
idea? | never
a good
idea? |
|----------------------------|------------------------------|--------------------------|
- f. How do you think your friends would feel about using credit—to pay bills that have piled up? Would they feel it is
- | | | |
|----------------------------|------------------------------|--------------------------|
| usually
a good
idea? | sometimes
a good
idea? | never
a good
idea? |
|----------------------------|------------------------------|--------------------------|
- g. How do you think your friends would feel about using credit—to purchase a car? Would they feel it is
- | | | |
|----------------------------|------------------------------|--------------------------|
| usually
a good
idea? | sometimes
a good
idea? | never
a good
idea? |
|----------------------------|------------------------------|--------------------------|
- h. How do you think your friends would feel about using credit—to purchase furniture? Would they feel it is
- | | | |
|----------------------------|------------------------------|--------------------------|
| usually
a good
idea? | sometimes
a good
idea? | never
a good
idea? |
|----------------------------|------------------------------|--------------------------|

F. (CONTINUED)

Mr. Jones and Mr. Smith both needed to borrow \$300. One went to a finance company and the other to a bank.

F3. Mr. Jones is the one who went to the finance company.

- (a) Why did he go there to borrow the money instead of somewhere else?

- (b) What kind of a person is he?

- (c) How do you think he was treated?

- (d) If he can't pay the money back right when he is supposed to, what do you think will happen?

F4. Mr. Smith went down to the bank to borrow \$300.00.

- (a) Why did he go there to borrow the money instead of somewhere else?

- (b) What kind of a person is he?

- (c) How do you think he was treated?

- (d) If he can't pay the money back right when he is supposed to, what do you think will happen?

SCHEDULE G

Now I have here some questions that are a little different. I'm going to read you some sentences that we've started. We'd like you to give us a few words to finish the sentences. Don't bother to think out your answers—just say what occurs to you.

G1. The best thing to do with money is _____

G2. When his friend asked him for a loan, he _____

G3. Keeping records of money spent is _____

G4. When he was asked to contribute to the Community Fund he _____

G5. As he looked back over his record of the money he had spent _____

G6. Making monthly payments is _____

G7. With money you can _____

G8. When all his money was gone he _____

G9. As long as you have money _____

SCHEDULE H

Now that we've talked about money, we'd like to know how you feel about some other things.

- H1. Have you usually felt pretty sure your life would work out the way you want it to or have there been times when you haven't been very sure about it?

pretty sure

sometimes not very sure

- H2. In a social gathering, if you find you are not dressed like the other people there, does it make you feel uncomfortable or don't you care very much?

makes me feel
uncomfortable

don't care
very much

- H3. When people disagree with you, do you sometimes start to wonder whether you're right or do you nearly always feel sure of yourself even when people disagree with you?

wonder

feel sure

- H4. Do you feel that you are the kind of person that gets his share of bad luck or do you feel that you have mostly good luck?

bad luck

mostly good luck

- H5. Do you feel that children ought to be brought up to be different from their playmates or as much like them as possible?

ought to be
different

as much like them
as possible

- H6. Would you say that quite often you have trouble making up your mind about important decisions or don't you feel you ever have much trouble making up your mind on important decisions?

quite often

not much trouble

- H7. Do you feel that people are better off if they think and act like the people they associate with or if they stand out as being different?

think and act
like associates

stand out as
different

- H8. When you make plans ahead do you usually get to carry things out the way you expected or do things usually come up to make you change your plans?

things work as
expected

have to change plans

I. PERSONAL DATA

11. What is your (head's) occupation? (What sort of work do you do?)

(If unemployed or retired, also ask what he does when working)

12. Do you work for yourself or someone else or what? _____

(If other adults in family)

13. Is there anyone else in the family who is working or looking for work?

(Ask about each adult who works)

- 13a. What sort of work does (he) do? _____

14. Age of head of family (years):
-
- 18-24
-
- 25-29
-
- 30-34
-
- 35-39
-
-
- 40-44
-
- 45-49
-
- 50-54
-
- 55-59
-
- 60-64
-
- 65-69
-
- 70 or over

15. Sex of head of family:
-
- man
-
- woman

16. Education of head of family:
-
- 8 years or less
-
- 9 - 12 years
-
-
- college - nongrad
-
- college - grad

17. Number of adults who last year worked either full time or part time?

 nobody worked one person worked two people worked
 three or more people worked

J. FINANCIAL INFORMATION ABOUT FAMILY INTERVIEWED

		Column Number
Study number	1 - 3	6 8 2
Card	4	1
Interviewer number	5 - 6	- -
Interview number	7 - 8	- -
J1. How much income did you and your family make during the last calendar year, 1958 -- before taxes, including the income of everyone in the family? (please check proper box)		
0 under \$1,000	1 \$1,000-1,999	2 \$2,000-2,999
3 \$3,000-3,999	4 \$4,000-4,999	5 \$5,000-5,999
6 \$6,000-7,499	7 \$7,500-9,999	8 \$10,000-14,999
9 \$15,000-19,999	& \$20,000 or more	9
J2. How many checking accounts do you have in this family?		10
0 no one in family has checking account	1 one checking account in family	
2 two checking accounts in family	3 three or more checking accounts in family	
J2a. Total amount in checking accounts (the first of this month):	\$ _____	11-15
J3. How many savings accounts do you have in this family?		16
0 no one in family has savings accounts	1 one savings account in family	
2 two savings accounts in family	3 three or more savings accounts in family	
J3a. Total amount in savings accounts (the first of this month):	\$ _____	17-21
J4. Does anyone in the family have any U. S. Government savings bonds?		22
0 family has no savings bonds	1 family does have bonds, present value under \$1,000	
2 family does have bonds, present value \$1,000 or above		

AN INVESTIGATION OF RESPONSE ERROR

J. (CONTINUED)

Column
number

- J5. Does anyone in the family own any common or preferred stock in a corporation?

0

family owns no common or preferred stock

1

family owns common or preferred stock, present value under \$1,000

2

family owns common or preferred stock, present value \$1,000 or above

- J6. Do you have a mortgage on your home or on any other real estate?

0

1

2

3

4

none	under \$5,000	\$5,000-9,999	\$10,000-14,999	\$15,000 & over
------	---------------	---------------	-----------------	-----------------

- J7. How many cash loans did members of this family have as of the first of this month?

none

one

two

three

four

FIRST
CASH
LOAN

	1	2	3
Lender:	bank	credit union	personal loan company or small loan company
	4	5	
	friend or relative	other (who?)	
Purpose:	_____		
Payment arrangements:	\$ _____ per _____ (month? week?)		
Total number of payments made:	_____		
Number of payments left to make as of the first of this month:	_____		

SECOND
CASH
LOAN

	1	2	3
Lender:	bank	credit union	personal loan company or small loan company
	4	5	
	friend or relative	other (who?)	
Purpose:	_____		
Payment arrangements:	\$ _____ per _____ (month? week?)		
Total number of payments made:	_____		
Number of payments left to make as of the first of this month:	_____		

23	--
24	--
25	--
26	--
27	--
28-30,31	----
32-33	---
34-35	---
36	--
37	--
38-40,41	----
42-43	---
44-45	---

J7. (CONTINUED)

Column
Number

THIRD
CASH
LOAN

1	2	3
Lender: <input type="text" value="bank"/>	<input type="text" value="credit union"/>	<input type="text" value="personal loan company or small loan company"/>
4	5	
<input type="text" value="friend or relative"/>	<input type="text" value="other (who?)"/>	
Purpose: _____		
Payment arrangements: \$ _____ per _____ (month? week?)		
Total number of payments made: _____		
Number of payments left to make as of the first of this month: _____		

46	--
47	--
48-50,51	----
52-53	---
54-55	---

Study number

Card

Interviewer number

Interview number

1-3	<u>6</u> <u>8</u> <u>2</u>
4	2
5-6	---
7-8	---
9	--
10	--
11	--
12-14,15	----
16-17	---
18-19	---

J8. How many instalment purchases were members of this family paying on as of the first of this month?

FIRST
INSTAL-
MENT
PUR-
CHASE

Purpose: _____				
	1	2		
To whom owed:	<input type="text" value="retailer or dealer"/>	<input type="text" value="sales finance company"/>		
	3	4	5	
	<input type="text" value="credit union"/>	<input type="text" value="bank"/>	<input type="text" value="other (who?)"/>	
Payment arrangements: \$ _____ per _____ (month? week?)				
Total number of payments made: _____				
Number of payments left to make as of the first of this month: _____				

QUESTIONNAIRE, THIRD FIELD EXPERIMENT

Interviewer's name and number: _____

Interview number: _____ Date: _____

Take-time: _____

LIST BELOW ALL ADULTS LIVING IN THE DWELLING UNIT (List all persons 18 and over and everyone who is married, regardless of age.)

Relationship to head	Sex	Family Unit No.	Indicate respondent
1. Head		1	
2.			
3.			
4.			
5.			
6.			
7.			

ASK ABOUT THIS FAMILY

(1) How many children under 18 do you have? How old are they? _____

(2) We'd like to know whether there have been any changes in your family during the last year. Is there anyone living with you now who wasn't here a year ago?

 yes no

IF YES 2a. Who? _____

(3) Was there anyone living with you a year ago who isn't here now?

 yes no

IF YES 3a. Who was it? _____

THUMBNAIL SKETCHWho was present during the interview ?Interviewer's Rating of Probable Accuracy of Financial Data

(a)	Income	very accurate	reasonably accurate	somewhat inaccurate	very inaccurate
(b)	Savings accounts	very accurate	reasonably accurate	somewhat inaccurate	very inaccurate
(c)	Cash loans	very accurate	reasonably accurate	somewhat inaccurate	very inaccurate
(d)	Instalment purchases	very accurate	reasonably accurate	somewhat inaccurate	very inaccurate

Comments:

A. CURRENT ECONOMIC SITUATION

A1. About how long have you people lived here at this address?

A2. Do you own your home or pay rent or what?

owns or is buying

pays rent

other (explain)

A3. We are interested in how people are getting along financially these days. Would you say that you and your family are better off or worse off financially than you were a year ago?

A4. Looking back over the last six months, did things work out pretty much as you expected financially, or did anything unexpected happen?

A5. Now looking ahead, do you think that a year from now you people will be better off financially or worse off or just about the same?

AN INVESTIGATION OF RESPONSE ERROR

B. FINANCIAL MANAGEMENT

Now I have some questions about how people handle their finances.

- B1. As you know, many people buy things on the instalment plan these days. Do you think it is a good idea or a bad idea to buy things on the instalment plan?

- B1a. What do you have in mind? _____

IF
MARRIED
COUPLE

- B2. All of us have bills which come in every month or every so often. In some families the husband pays all the bills, in some the husband pays some and the wife others, and sometimes the wife pays the bills. How is it done in your family?

- IF R IS B3a. In your family, does your wife have a certain amount of
HUSBAND money to cover the household expenses?

- IF R IS B3b. Do you have a certain amount of money to cover the
WIFE household expenses?

- B4. How about for other things -- does each person get an allowance and pay for certain things out of that or do you each take money when you need it?

B. (CONTINUED)

- B5. Some people try to set aside in advance so much money for food, so much for rent, so much for different bills, and so much for saving. Do you try to do any planning like that?

IF
MAKES
ANY
PLANS

B6a. What kind of plans do you make? _____

B6b. How far in advance do you try to plan? _____

- B7. Some people keep complete records of all the money they spend while others just keep check stubs and old bills and others don't keep any records at all. Do you keep any records of what you have spent?

IF KEEPS
RECORDS

B7a. What kind of records do you keep? _____

B. (CONTINUED)

- B8. Thinking of a young couple just starting out in life, if they asked you for advice, what would you advise them about handling their money?

- B8a. IF "BUDGET" NOT SPECIFICALLY MENTIONED, THEN ASK Would you advise a young couple to keep a budget and plan their expenditures in advance?

- B8b. Why do you say so? _____

- B9. I'd like you to think back to when you were growing up. How many children were there in the family?

- B9a. Were you the oldest or the youngest or what?

B. (CONTINUED)

B10. When you were growing up did your parents discuss with you how the family was getting along financially?

B11. How old were you before you knew how much the family income was?

B12. In your opinion, how old do you think children should be before they know about the family income and savings?

SCHEDULE C. SAVINGS

Now I have some questions I'd like to ask about your experience with savings institutions and your feelings about them.

C1. How did you pick the institution where you have your account? _____

C2. Do you have accounts in more than one institution? _____

(IF YES, repeat C3 to C11 for the two institutions where he does most business.)

FIRST
SAVINGS
INSTITUTION

C3. How do you like it? (How do you like the savings institution where you have your account?) _____

C4. How would you compare the institution you use with others in this area? _____

C5. How about the interest rate on savings accounts at this institution -- how does it compare with what you can get on a savings account somewhere else? _____

IF LOWER AT THIS SAVINGS INSTITUTION

C6. Have you ever thought of moving your savings account where you could get higher interest? _____

C7. Which of the services of the institution do you use? _____

C. (CONTINUED)

FIRST
SAVINGS
INSTITUTION

C8. Has the institution ever done anything that irritated you? (What was it?)

C9. Has the institution ever done anything that particularly pleased you? (What was it?)

C10. In your family who actually goes to this institution? _____

C10a. How often do they usually visit it? _____

C11. Some people go to a downtown savings institution while others go to its suburban office. Which does your family use? (Why?)

C11a. Is there any other reason? _____

IF SAYS
"CONVENIENT"

C11b. In what way is it convenient? _____

SECOND
SAVINGS
INSTITUTION

C1. How did you pick this savings institution? _____

C3. How do you like it? (How do you like this second institution?)

C. (CONTINUED)

SECOND
SAVINGS
INSTITUTION

C4. How would you compare this second savings institution with others in this area? _____

C5. How about the interest rate on savings accounts at this institution -- how does it compare with what you can get on a savings account somewhere else? _____

IF LOWER AT THIS INSTITUTION

C6. Have you ever thought of moving your savings account where you could get higher interest? _____

C7. Which of the services of this institution do you use? _____

C8. Has the institution ever done anything that irritated you? (What was it?) _____

C9. Has the institution ever done anything that particularly pleased you? (What was it?) _____

C10. In your family who actually goes to this institution? _____

C10a. How often do they usually visit it? _____

C. (CONTINUED)

SECOND
SAVINGS
INSTITUTION

C11. Some people go to a downtown savings institution while others go to its suburban office. Which does your family use? (Why?)

C11a. Is there any other reason? _____

IF SAYS
"CONVENIENT"

C11b. In what way is it convenient? _____

C12. Thinking of savings institutions in general, apart from what they are doing already, is there anything that they could do that would be helpful to people like you? (What do you have in mind?)

C. (CONTINUED)

Mr. Jones and Mr. Smith both needed to borrow \$300. One went to a finance company and the other to a bank.

C10. Mr. Jones is the one who went to the finance company.

- (a) Why did he go there to borrow the money instead of somewhere else?

- (b) What kind of a person is he? _____

- (c) How do you think he was treated? _____

- (d) If he can't pay the money back right when he is supposed to, what do you think will happen?

C. (CONTINUED)

C11. Mr. Smith went down to the bank to borrow \$300.

(a) Why did he go there to borrow the money instead of somewhere else?

(b) What kind of a person is he?

(c) How do you think he was treated?

(d) If he can't pay the money back right when he is supposed to, what do you think will happen?

AN INVESTIGATION OF RESPONSE ERROR

D. INFORMATION ABOUT FAMILY INTERVIEWED

D1. What is (head's) occupation? (What sort of work does head do?) _____

IF UNEMPLOYED
OR RETIRED

D1a. What kind of work does (did) (head) do when working?

D2. Does (did) (head) work for (himself) or someone else or what? _____

IF SOMEONE ELSE

D3a. Is (head) employed now? yes no

IF SELF-EMPLOYED

D3b. Does (head) regularly employ people other than (himself)?
 yes no

D4. Is there anyone else in the family who is working or looking for work? (What sort of work does (he) do?) _____

D5. Do you have any relatives who do not live with you and who are dependent on you for more than half of their living?

none one two three

D6. Are you married, single, or what?

married single other

IF MARRIED AND LIVING TOGETHER

D7. How long have you been married? (Check nearest year)

not applicable 1 or less 2 3 4 5-9 10-20 over 20

D8. Age of head of family (years): 18-20 21-24 25-29 30-34 35-39

40-44 45-49 50-54 55-59 6-64 65 and over

D9. Education of head: How many grades of school have you (has he) finished?

1 2 3 4 5 6 7 8 9 10 11 12

IF
MORE
THAN
8

D10. Have you (has he) had other schooling? yes no

IF YES D11. What other schooling have you (has he) had?

(Type of schooling) _____
(College, secretarial, business, etc.)

IF ATTENDED COLLEGE D12. Do you have (has he) a college degree?

yes no

FINANCIAL FORM, THIRD FIELD EXPERIMENT

Interviewer's number: _____ Interview number: _____ Form of schedule: A B C D
 (If C or D)
 Form to R. G. sent: Yes No

PART 1. FAMILY INCOME, 1958

1. How much did (the head of the family) receive from wages and salaries in 1958, that is, before deductions for taxes or anything? \$ _____

2. In addition to this did (the head) have any income from bonuses, overtime, and commissions?

	<input type="checkbox"/> yes	<input type="checkbox"/> no	How much?	\$ _____
--	------------------------------	-----------------------------	-----------	----------

3. Did (the head) receive any income from:

(a) a business?	<input type="checkbox"/> yes	<input type="checkbox"/> no	How much?	\$ _____
(b) professional practice?	<input type="checkbox"/> yes	<input type="checkbox"/> no	How much?	\$ _____
(c) a trade?	<input type="checkbox"/> yes	<input type="checkbox"/> no	How much?	\$ _____
(d) farming?	<input type="checkbox"/> yes	<input type="checkbox"/> no	How much?	\$ _____
(e) rent?	<input type="checkbox"/> yes	<input type="checkbox"/> no	How much?	\$ _____
(f) roomers and boarders?	<input type="checkbox"/> yes	<input type="checkbox"/> no	How much?	\$ _____
(g) any other self-employment?	<input type="checkbox"/> yes	<input type="checkbox"/> no	How much?	\$ _____
(h) interest, dividends, a trust fund, or royalties?	<input type="checkbox"/> yes	<input type="checkbox"/> no	How much?	\$ _____
(i) a veteran's pension, veteran's school allotment, or serviceman's family allotment?	<input type="checkbox"/> yes	<input type="checkbox"/> no	How much?	\$ _____
(j) retirement pay, unemployment compensation, old age pension, annuities, alimony, regular contributions, or welfare?	<input type="checkbox"/> yes	<input type="checkbox"/> no	How much?	\$ _____

- Sub-total \$ _____

PART 1. (CONTINUED)

Sub-total from previous page: \$ _____

3. Did (the head) receive any income from: (continued)

INCOME
OF
WIFE

4. Did the wife of the head have any income during the year?

 yes noIF YES 5. Was it from wages, salary, a business, or what? _____

6. How much did she receive?

Source				
Amount	\$		\$	

= \$ _____

IF WIFE
HAD WAGES
OR SALARY 7. When she was working did she usually work full time or part time or what? full time part timeINCOME
OF
OTHER
MEMBERS
OF
FAMILY

8. Did any other members of the family have any income?

 yes noIF YES 9. Who? (Relation to head) _____

10. Was it from wages, salary, a business, or what? _____

11. How much was it?

Who				
Source				
Amount	\$	\$	\$	\$

= \$ _____

Total income of this family in 1958 \$ _____

PART 2. SAVINGS

We want to estimate as carefully as we can how much you saved during 1958. The main way many people save is to put money in savings accounts or in bonds, so we'll start with those:

1. How many savings accounts were owned by members of your family at any time during 1958? _____ Have you opened any new accounts in 1959? _____

Account	Is this a single or joint account? (Check one)	Is this account in the name of the head, wife, or whom?	Balance Jan. 1, 1958	Balance Jan. 1, 1959	Increase over the year	Decrease over the year
1	<input type="checkbox"/> single <input type="checkbox"/> joint				\$ _____	\$ _____
2	<input type="checkbox"/> single <input type="checkbox"/> joint				\$ _____	\$ _____
3	<input type="checkbox"/> single <input type="checkbox"/> joint				\$ _____	\$ _____
4	<input type="checkbox"/> single <input type="checkbox"/> joint				\$ _____	\$ _____
5	<input type="checkbox"/> single <input type="checkbox"/> joint				\$ _____	\$ _____
New account	<input type="checkbox"/> single <input type="checkbox"/> joint		Balance July 1, 1959 \$ _____			

2. How many checking accounts were owned by members of your family at any time during 1958? _____ Have you opened any new accounts in 1959? _____

Account	Is this a single or joint account? (Check one)	Is this account in the name of the head, wife, or whom?	Balance Jan. 1, 1958	Balance Jan. 1, 1959		
1	<input type="checkbox"/> single <input type="checkbox"/> joint				\$ _____	\$ _____
2	<input type="checkbox"/> single <input type="checkbox"/> joint				\$ _____	\$ _____
3	<input type="checkbox"/> single <input type="checkbox"/> joint				\$ _____	\$ _____
New account	<input type="checkbox"/> single <input type="checkbox"/> joint		Balance Jan. 1, 1959 \$ _____			

3. How much did the head of the family and his wife have in U.S. Government Savings Bonds as of January 1, 1958? As of January 1, 1959? (How much did other family members have?)

	Total face value			
	Jan. 1, 1958	Jan. 1, 1959		
Bonds owned by head or wife	\$ _____	\$ _____	\$ _____	\$ _____
Bonds owned by others in the family	\$ _____	\$ _____	\$ _____	\$ _____

4. How much did this family have in other U.S. Government Bonds as of January 1, 1958? As of January 1, 1959?

	Total face value			
	Jan. 1, 1958	Jan. 1, 1959		
	\$ _____	\$ _____	\$ _____	\$ _____
Totals of increases and decreases			\$ _____	\$ _____
Net total change			\$ _____	

PART 2. (CONTINUED)

5. Did you buy or sell a home or any other real estate in 1958?

purchased
real estate

sold real
estate

both purchased
and sold

neither bought
nor sold real
estate in 1958

(a) Purchase of real estate in 1958

Type of property _____

Price paid \$ _____

Less amount borrowed \$ _____

Net investment \$ _____

(b) Sale of real estate in 1958

Type of property _____

Price received
(after selling expenses) \$ _____

Less amount to pay off
mortgage (if any) \$ _____

Net amount realized \$ _____

6. Did you make any mortgage payments either on a mortgage on your own home or other real estate owned by this family in 1958?

(a) Own home (please check the appropriate box)

owned home clear
of debt in 1958

owned home and was
paying on a mortgage
in 1958

did not own
home in 1958

Total payments on principal of mortgage in 1958 \$ _____

(b) Other real estate (please check the appropriate box)

owned other real estate
clear of debt in 1958

owned other real estate
and was paying on a mortgage
in 1958

did not own other
real estate

Type of property _____

Total payments on principal of mortgage in 1958 \$ _____

7. Does anyone in the family carry life insurance? yes no

Total life insurance premiums paid in 1958 \$ _____

PART 2. (CONTINUED)

8. Did anyone in the family buy or sell any stock or shares in 1958?

purchased corporate stock in 1958	sold corporate stock in 1958	both purchased and sold	neither bought nor sold
Total new money invested in stock			\$ _____
Money realized from sale of stock and withdrawn from the market			\$ _____
Net purchase or sale of stock			\$ _____

9. Did anyone in the family make any payments to a retirement or pension fund in 1958 (not counting Social Security)?

made payments to retirement or pension fund or annuity	made no payments
Amount invested in retirement or pension plans by this family?	
	\$ _____

10. We'd like to know about any large purchases made in 1958 by the family. Did you buy . . . ? (please check items bought)

	Total price (net of trade-in)	Number of payments left to make and amount of payments as of Dec. 31, 1958	Balance still owed or left to pay as of Dec. 31, 1958
		(If no payments left, write "NONE")	
(a) <input checked="" type="checkbox"/> car	\$ _____	_____	\$ _____
(b) <input checked="" type="checkbox"/> furniture	\$ _____	_____	\$ _____
(c) <input checked="" type="checkbox"/> refrigerator	\$ _____	_____	\$ _____
(d) <input checked="" type="checkbox"/> stove	\$ _____	_____	\$ _____
(e) <input checked="" type="checkbox"/> television set	\$ _____	_____	\$ _____
(f) <input checked="" type="checkbox"/> washing machine	\$ _____	_____	\$ _____
(g) <input checked="" type="checkbox"/> additions or repairs to the home	\$ _____	_____	\$ _____

(h) Did you make any other large purchases? (What were they?)

	\$ _____	_____	\$ _____
	\$ _____	_____	\$ _____

AN INVESTIGATION OF RESPONSE ERROR

PART 2. (CONTINUED)

11. Did you make any payments in 1958 on things you'd bought on the instalment plan before 1958? Or did you make any payments in 1958 on cash loans taken out before 1958?

paid on debts or
on instalment
loans in 1958

did not pay



Types of debt or purchase on which made payments	Number of payments made and amount of payments in 1958	Total amount paid off in 1958
1.		
2.		
3.		

12. Did anyone in the family borrow cash in 1958?

borrowed cash
in 1958

did not borrow
cash in 1958



Purpose of loan	Number of payments left to make and amount of payments as of Dec. 31, 1958 (If no payments left, write "NONE")	Balance still owed as of Dec. 31, 1958
1.		
2.		
3.		

PART 2. (CONTINUED)

13. In 1958, did anyone in the family own a business of any kind?

yes
 no
 Type of business
 corporation
 unincorporated business
 owns both

IF OWNED A BUSINESS

13a. Did you invest any new money in the business or receive any proceeds from the liquidation or sale of a business in 1958?

invested new money in a business ↓	sold or liquidated a business in 1958 ↓	neither invested new money in a business nor sold or liquidated a business in 1958
Amount of new money invested	Net proceeds of sale or liquidation	
\$ _____	\$ _____	

IF BUSINESS IS UNINCORPORATED

13b. Did the business make a profit or show a loss in 1958?

profit
 loss

IF PROFIT OR BROKE EVEN

Did you leave any profit in the business? yes no
 (How much?) \$ _____

IF LOSS

How much was the loss in 1958? \$ _____

14. Did you have any other large receipts of money or expenditures in 1958?

had other large receipts ↓	had other large expenditures ↓	had no other large receipts or expenditures														
Receipts	Expenditures															
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 20%;">Item</th> <th style="width: 80%;">Amount</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>\$ _____</td> </tr> <tr> <td>2.</td> <td>\$ _____</td> </tr> </tbody> </table>	Item	Amount	1.	\$ _____	2.	\$ _____	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 20%;">Item</th> <th style="width: 80%;">Amount</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>\$ _____</td> </tr> <tr> <td>2.</td> <td>\$ _____</td> </tr> <tr> <td>3.</td> <td>\$ _____</td> </tr> </tbody> </table>	Item	Amount	1.	\$ _____	2.	\$ _____	3.	\$ _____	
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RESULTS OF STUDIES USING SPLIT-SAMPLES ON THE SURVEYS OF CONSUMER FINANCES

This appendix reports the results of three analyses of methodological problems. The analyses are based on data from the 1957 and 1958 Surveys of Consumer Finances conducted by the Survey Research Center and supported by the Federal Reserve Board. The design of these surveys was the result of cooperative efforts of the staffs of the Center and of the Board's Division of Consumer Credit and Statistics. The three areas of analysis are: (1) the effect of differing question sequences on reports of year-ago income, (2) current versus memory reports of liquid-asset items, and (3) the effects of giving more information about the survey to respondents prior to interviewing.

The method of investigation used in these methodological studies differs from that used in the investigations reported in the body of this monograph. In the studies reported in this Appendix there is no possibility of validation of individual reports in contrast to the situation in the experimental studies. The basic method used in these analyses has been to split the sample on a random basis and to assign different methods of investigation to the different parts of the sample. At a minimum, therefore, it is possible to detect whether or not there are differences among the different techniques of investigation used. When differences do occur it has been the experience in these studies that there is usually a fairly strong presumption that one of the reports is to be preferred. When memory data are compared with data obtained currently, the presumption seems reasonable that the currently collected data are more accurate. When two reports of financial magnitudes are compared, the presumption seems fairly strong that the more complete is the more accurate. This presumption finds support in the investigations reported earlier in this monograph where the most common type of error is incomplete or partial reporting. Finally, it is assumed that a high response rate is to be preferred to a low response rate and fewer not-ascertained cases are to be preferred to more.

Income Change

Questions about change in spending-unit income from the previous year to the most recent year were asked in the 1958 Survey of Consumer Finances.

Since many of the interviews involved were reinterviews, a comparison is possible between answers to questions about 1956 income asked early in 1957 and questions about 1956 income asked early in

1958. The results for those reinterviews with complete reports of income were as follows:

	<u>Mean income 1956</u>
Current report (based on extensive questions)	\$5,600
Year-later report (global question)	\$5,919
Percent of change	+6

Mean income from the year-later global memory questions was higher by \$320, or 6 percent, than the mean from the extensive questioning about the same period a year earlier. Two sequences of questions about "year-ago" income were asked, as will be explained in more detail later. The previously mentioned result represents the average for the two combined.

What is responsible for this difference? Do people have a biased memory about the previous year's income in the direction of the change in income during the recent year? Comparison of the two extensive reports of income a year apart for the reinterviewed groups shows that mean income increased by \$240 or 4 percent. One possible interpretation of this result, therefore, is that people tend to minimize the differences between the income they received in the most recent year and that which they received the year before that.

From a methodological point of view, however, the most important feature of this study of reports of income change was the result of the split sample with different interviewing procedures. Two series of questions were used to estimate "year-ago" income in the second interview.

The first sequence of questions was as follows:

We're interested in how your income last year compares with that of the year before.

G50. Can you tell me about what your total income was for 1956, the year before last? I mean yourself and _____ (other members of SU)?
 \$ _____

IF
CAN'T
SAY

G51. Was your income in 1957 larger, the same or smaller than it was in 1956?

much larger in 1957	somewhat larger in 1957	about the same	somewhat smaller in 1957	much smaller in 1957
------------------------	-------------------------------	-------------------	--------------------------------	----------------------------

IF
NOT
SAME

G52. Why was your income different in 1957? _____

G53. Any other reasons? _____

The second series of questions was as follows:

People's incomes often vary from year to year because of changes in wages or because more members of the family are working or someone has an extra job or for other reasons.

ASK EVERYONE

G54. Was your income in 1957 larger or smaller than the year before . . . I mean yourself and _____
(other members of SU)?

1957 larger
than 1956

1957 smaller
than 1956

same

IF
NOT
SAME

G55. Why was your income different in 1957? _____

G56. Any other reasons? _____

G57. Thinking back, what would you say your income was for the year before last (1956), for you and other members of SU?

\$ _____

In each format the sequence on income change followed an extensive series of questions about spending-unit incomes in the most recent year. The essential difference between the two sequences is that the second series of questions turns the respondent's attention to his income a year ago and asks him to think about it before asking the dollar amount. The purpose of the second sequence was to reduce memory error by leading up gradually to the factual question about year-ago income.

A crucial question, therefore, is whether there was any difference between the two sequences of questions in the ratio of the report based on the memory questions to the current report. For the first sequence the ratio of the two reports for identical cases including only those interviews where the report of income was complete both times was 109.3. The number of interviews involved was 359. For the second question sequence the ratio was 103.1, based on 450 re-interviews. Ideally one would have looked for identical reports, or a ratio of 100.0. Thus, to the extent that there was any difference between

the two question sequences the second sequence was the more satisfactory. The difference, however, was not large enough to be beyond the range of chance fluctuation.

We can also compare the proportion of complete answers from the two sequences. From the first sequence of questions there were 34 percent of the cases which had incomplete answers, while in the second sequence of questions only 15 percent of the answers were not complete. The numbers of interviews involved were 517 and 526, respectively. This difference, of almost 20 percent, is easily significant at the 95 percent level.

Why was the second sequence more successful? The randomization procedure insured that the two groups of respondents were the same; the interviewers were the same; the context of questions on other topics was the same. The only difference was between question sequences. It seems appropriate to conclude that the second sequence was more successful because it achieved the purpose for which it was intended, that of reducing memory error. This evidence suggests that, in general, memory error can be reduced by taking time to lead up gradually to the questions to which accurate responses are desired. In particular it may be useful to ask the respondent about factors which may have caused changes between his current situation and his situation in the past.

Current Versus Memory Reports of Liquid Assets

In a reinterview survey liquid asset change can be estimated from the second interview by subtraction of a year-ago memory report from a current report, or, using both interviews, by subtraction of two current reports taken a year apart. In what way do the year-ago memory reports differ from current reports? In the 1958 Survey of Consumer Finances careful attention was paid to whether reports of ownership of savings accounts by the spending unit differed between the two interviews. Of all spending units reported to have savings accounts in either interview, over 20 percent did not report savings accounts in both interviews. Comparable figures are 11 percent and 20 percent, respectively, for checking accounts and savings bonds. If one adds to these interviews those cases where there is disagreement over who in the spending unit owns the particular asset items, the figures soar to 48 percent for savings accounts, 38 percent for checking accounts, and 38 percent for savings bonds. The amounts involved are substantial. Reported liquid assets differed by at least \$500 for 20 percent of the spending units owning liquid assets.

These discrepancies were not unexpected, and, in order to reduce them, the 1958 Survey design incorporated a system whereby the interviewer brought the year-earlier report of liquid assets to the reinterview in a sealed envelope. With the respondent's permission this envelope was opened after the memory report had been obtained.

A reconciliation was attempted in all possible cases but the original entries were not erased or made illegible. The coders thus had available interviews from both years and the results of the reconciliation. The discrepancies described in the preceding paragraph are the discrepancies before the reconciliation, to the extent that they could be identified.

The interviewers' reports were not always entirely clear as to whether the numbers shown were before or after the reconciliation. No attempt has been made to quantify the effect of the reconciliation on the liquid asset change data, although the reconciled data were used in the analysis of the survey. The reconciled data were not used by the coders to improve the report of year-ago liquid asset holdings. For these reasons it is not easily possible to tabulate the effect of the reconciliation on the memory data in the 1958 Survey. A more satisfactory approach to the study of the effects of a reconciliation and reinterview seemed to be a special study designed for the purpose of considering this problem. The first field experiment was designed with this objective in mind. Plans for this experiment were influenced by the experience with the 1958 Survey of Consumer Finances.

The Effect of a Booklet

The addresses selected in the Survey of Consumer Finances are always sent a letter indicating that the household has been selected for interviewing and explaining briefly the purpose of the survey. In the 1958 survey, a booklet was prepared which was to supplement the letter and was sent to addresses in one-half of the sample. The booklet was a twelve-page photo-offset printed document in black ink on green paper. Each page contained simple line drawings and a short text organized under the heading on the cover "So You've Been Selected for Interview." The seals of the Board of Governors and the University of Michigan were included to lend the authority of these institutions. Inside the booklet the following questions were briefly answered: What is the Federal Reserve Board? Why does the Board ask these questions? How was I picked for the sample? What will be done with my answers? The booklet also included a photograph of a final report and an assurance that individual answers would be kept anonymous.

For this inquiry the sample was split at the primary sampling-unit level. Geographical areas were paired and one-half of the areas were randomly selected. This method of splitting the sample seemed preferable to sending the booklet to half the addresses in each block. The method used made certain that the receipt of a booklet by a neighbor who might show it to a potential respondent at a "no booklet" address would not confound the experiment.

The effect of using the booklet on the over-all response rate and on the proportion of refusals in the areas in which the booklet was used was negligible. Response rates in this survey were also computed separately for old addresses and for new addresses. Among the old or reinterview addresses the proportion of non-response was 19.3 percent for addresses with the booklet and 19.6 percent for those without. For the new addresses the proportion of non-response where the booklet was used was, similarly, 19.2 percent, while for the non-booklet addresses the non-response rate was 16.6 percent. These differences are well within sampling error. If any difference does exist between the booklet and non-booklet addresses, it runs in favor of the non-booklet part of the sample. In other words the booklet failed to reduce the proportion of non-response.

Comparisons can also be made with respect to the proportion who reported any liquid assets and mean reported liquid assets between areas where the booklet was received and where it was not received. The differences observed are well within the margin of chance fluctuation. Comparisons were also made for specific components of total liquid assets, and, again, there were no differences which cannot be attributed easily to chance. Finally, a comparison was made with respect to reports of mean income. The differences again were within the margin of sampling error; if anything, there are higher reports in the areas where the booklet was not used. Thus, the booklet had no effect on the accuracy or completeness of reports either of liquid assets or of income.

These results must be interpreted in the light of information about the practice of the Survey Research Center in connection with the Survey of Consumer Finances. Even before the booklet was introduced considerable care was taken to inform the respondents about the nature of the survey and its objectives and to reassure them as to its confidentiality. The devices used included the introductory letter, press releases to local newspapers, the use of a short leaflet entitled, "Why Ask Me?" which the interviewers carried with them, and the use of reprints of articles from the Federal Reserve Bulletin, also carried by interviewers when they approached respondents. It may also be relevant that the Center tends to conduct a number of successive investigations in one area and may have developed some local reputation from the successive press releases concerning successive surveys which have appeared in local newspapers. The results of the present experiment showed that additional gains from further explanation in a booklet sent in advance to the respondent are not recognizable.

The interviewers on the project, it should be added, reacted enthusiastically to the use of the booklet. They felt that there were situations in which it was of assistance to them and that it made their task of explanation somewhat easier. Thus, something was

gained from the booklet and it seemed clear that nothing was lost. Booklets prepared along the general lines of the booklet used in this survey have been used, therefore, in subsequent financial surveys. Such a booklet was used, for example, in connection with the 1960 Survey of Consumer Finances.

This experience is of some interest because of its implications with regard to the cause and cure of response error. It suggests strongly that major gains are not likely to be made by more complete or detailed explanations of financial surveys to the respondents. Explanation is necessary, but the existing practice of the Center as described earlier seems to be adequate.

Supplementary Table 1. Response Error in Fall Report of Fall, 1958, Balance in Relation to Experimental Manipulation
(Percentage distribution of interviews)^a

Response error in fall report of Fall, 1958, balance	All interviews	Type of interview used in fall	
		Structured	Unstructured
Failed to report account	21	19	24
Account owned by respondent or spouse or the two jointly	14	14	13
Account owned entirely or in part by someone other than respondent and spouse	7	5	11
Reported account, balance not ascertained	17	13	22
Reported account but refused to state balance	13	10	18
Reported a total in several accounts but would not break it down	4	3	4
Reported balance for account			
Actual amount LARGER than reported amount by:			
\$9,000 and over	--b	--b	--b
8,000 - 8,999	(1)	--b	2
7,000 - 7,999	--b	--b	--b
6,000 - 6,999	(1)	(1)	--b
5,000 - 5,999	(1)	--b	2
4,000 - 4,999	(3)	(1)	4
3,000 - 3,999	(2)	(1)	2
2,000 - 2,999	(5)	(2)	7
1,000 - 1,999	(8)	(6)	5
900 - 999	(1)	(1)	--b
800 - 899	--b	--b	--b
700 - 799	(2)	(1)	2
600 - 699	(3)	(1)	4
500 - 599	(1)	(1)	--b
400 - 499	(2)	(1)	2
300 - 399	(4)	(3)	2
200 - 299	(2)	(1)	2
100 - 199	(3)	(3)	--b
1 - 99	--b	--b	--b

Supplementary Table 1. Response Error in Fall Report of Fall, 1958, Balance in Relation to Experimental Manipulation (Continued)

Response error in fall report of Fall, 1958, balance	All Interviews	Type of interview used in fall	
		Structured	Unstructured
Actual amount SAME as reported amount (within \$1)	(1)	(1)	-- b
Actual amount SMALLER than reported amount by:			
\$ 1 - 99	(4)	(1)	7
100 - 199	(2)	(2)	-- b
200 - 299	(3)	(2)	2
300 - 399	(3)	(1)	4
400 - 499	(3)	(1)	5
500 - 599	(2)	(2)	-- b
600 - 699	(1)	(1)	-- b
700 - 799	-- b	-- b	-- b
800 - 899	-- b	-- b	-- b
900 - 999	-- b	-- b	-- b
1,000 - 1,999	(2)	(2)	-- b
2,000 - 2,999	(1)	(1)	-- b
3,000 - 3,999	(2)	(1)	2
4,000 - 4,999	(2)	(2)	-- b
5,000 - 5,999	-- b	-- b	-- b
6,000 - 6,999	-- b	-- b	-- b
7,000 - 7,999	-- b	-- b	-- b
8,000 - 8,999	-- b	-- b	-- b
9,000 and over	-- b	-- b	-- b
Total	100	100	100
Number of interviews	109	63	46

^a Figures shown in parentheses are frequency counts; percentagizing of such small frequencies would introduce large rounding errors.

^b No interviews in the sample fell into these cells.

Supplementary Table 2. Response Error in Fall Report of Fall, 1958, Balance in Relation to Size of Actual Balance in Account with Means (Numerical and percentage distribution of interviews)^a

Response error in fall report of Fall, 1958, balance	Actual balance, Fall, 1958												Mean actual balance Fall, 1958
	All interviews		\$0 - \$1,999		\$2,000 - \$3,499		\$3,500 - \$4,999		\$5,000 and over		Number	Percent	
	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number			
Failed to report account	21	(23)	10	(4)	26	(6)	24	(4)	30	(9)			\$ 4,293
Account owned by respondent or spouse or the two jointly	14	(15)	3	(1)	17	(4)	24	(4)	20	(6)			4,443
Account owned entirely or in part by someone other than respondent and spouse	7	(8)	7	(3)	9	(2)	--b	(0)	10	(3)			4,012
Reported account, balance not ascertained	17	(18)	13	(5)	9	(2)	23	(4)	23	(7)			4,700 ^c
Reported account but refused to state balance	13	(14)	10	(4)	4	(1)	23	(4)	17	(5)			5,064 ^c
Reported a total in several accounts but would not break it down	4	(4)	3	(1)	5	(1)	--b	(0)	6	(2)			3,427
Reported balance for account	62	(68)	77	(30)	65	(15)	53	(9)	47	(14)			3,425
Actual balance LARGER than reported balance by:													
\$9,000 or more		(0)		(0)		(0)				(0)			--
8,000 - 8,999		(1)		(0)		(0)				(0)			13,400
7,000 - 7,999		(0)		(0)		(0)				(0)			--
6,000 - 6,999		(1)		(0)		(0)				(1)			7,550
5,000 - 5,999		(1)		(0)		(0)				(1)			15,500
4,000 - 4,999		(3)		(0)		(0)				(3)			6,658
3,000 - 3,999		(2)		(0)		(0)				(2)			4,575
2,000 - 2,999		(5)		(0)		(3)				(5)			3,020
1,000 - 1,999		(8)		(3)		(2)				(8)			3,037
800 - 899		(0)		(0)		(1)				(0)			3,403
700 - 799		(1)		(0)		(0)				(1)			--
600 - 699		(2)		(1)		(1)				(2)			2,045
500 - 599		(3)		(2)		(0)				(3)			2,178
400 - 499		(1)		(0)		(0)				(1)			5,500
300 - 399		(2)		(1)		(0)				(2)			5,958
200 - 299		(4)		(1)		(1)				(4)			3,134
100 - 199		(2)		(2)		(0)				(2)			1,350
1 - 99		(3)		(2)		(1)				(3)			1,782
		(3)		(2)		(2)				(3)			1,451

AN INVESTIGATION OF RESPONSE ERROR

Supplementary Table 2. (Continued)

Response error in fall report of Fall, 1958, balance	Actual balance, Fall, 1958												Mean actual balance Fall, 1958
	All interviews		\$0- \$1, 999		\$2, 000 - \$3, 499		\$3, 500 - \$4, 999		\$5, 000 and over		Number		
	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number			
Actual amount SAME as reported amount		(1)	(0)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	3, 172
Actual balance SMALLER reported balance by:													
\$1 - 99	(4)	(2)	(2)	(0)	(2)	(2)	(2)	(2)	(2)	(2)	(0)	(0)	2, 768
100 - 199	(3)	(3)	(2)	(1)	(2)	(1)	(1)	(1)	(0)	(0)	(0)	(0)	1, 550
200 - 299	(3)	(3)	(2)	(1)	(2)	(1)	(1)	(1)	(0)	(0)	(0)	(0)	1, 815
300 - 399	(3)	(3)	(2)	(1)	(2)	(1)	(1)	(1)	(0)	(0)	(0)	(0)	2, 683
400 - 499	(2)	(2)	(2)	(1)	(2)	(1)	(1)	(1)	(0)	(0)	(0)	(0)	1, 567
500 - 599	(1)	(1)	(1)	(0)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	1, 575
600 - 699	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	1, 200
700 - 799	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	--
800 - 899	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	--
900 - 999	(2)	(2)	(2)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	--
1, 000 - 1, 999	(1)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	1, 275
2, 000 - 2, 999	(2)	(2)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	7, 600
3, 000 - 3, 999	(2)	(2)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	4, 700
4, 000 - 4, 999	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	6, 050
5, 000 - 5, 999	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	--
6, 000 - 6, 999	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	--
7, 000 - 7, 999	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	--
8, 000 - 8, 999	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	--
9, 000 or more	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	--
Total	100	(109)	100	(99)	100	(23)	100	(17)	100	(30)			\$3, 819 ^c

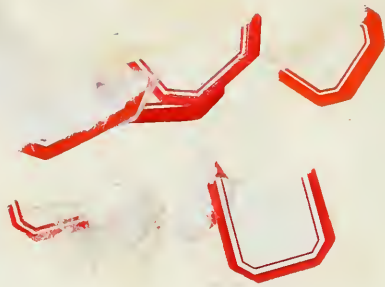
^b Less than 0.5 percent.

^c Includes 1 account in which balance was "greater than \$9, 999" but which was considered as \$9, 999 for the computations in this table.

^d Of these 39 accounts, only 4 had actual balances of less than \$1, 000. Of the 4, 2 reported the existence of the account but refused to state the balance.

^e Figures shown in parentheses are frequency counts; where no percent figure is given, it is because the percentagizing of such small frequencies would introduce large rounding errors.

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