TIME ALLOCATION OF SURVEY INTERVIEWERS AND OTHER FIELD OCCUPATIONS

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INTRODUCTION

The survey research interviewer and the job which she does should be of particular interest to social scientists. In the first place, the interviewer is the chief collector of the raw data which are used in social analysis. Her work influences both the quality and cost of social research. Hyman and others of the National Opinion Research Center staff have discussed in detail the effects of interviewers on the interviewing situation in Interviewing in Social Research.[1] Cost data, however, have not been generally available, but have become even more necessary as survey costs have risen precipitously over the past two decades, largely due to increases in interviewing costs. Before costs can be reduced, it is necessary to recognize how they originate. This is the first aim of the present paper.

Secondly, the occupational role of the interviewer is of intrinsic interest in itself. Interviewers spend most of their time in the field under very little supervision. In this respect, they are similar to salesmen, social workers, and public health nurses. The pay method for interviewers differs from that of the other occupations, since interviewers are paid on an hourly basis while the others work for either a fixed salary or commission. This might be expected to influence the interviewer's shaping of her job. A comparison of interviewing with these other field occupations is given in the second part of this paper.

The two parts of this paper are not really disjointed. A better understanding of the interviewing role leads to hypotheses about methods for controlling or reducing interviewing costs. These will be discussed in subsequent papers as part of the National Opinion Research Center project which deals with the control and reduction of survey costs.

Methods of Data Collection

Each of the tables to be presented in this paper will be described in detail so that the differences in the methods used will be clear. In general, the results are based on analysis of time sheets submitted either for the special study or routinely. These figures are certainly subject to memory or clerical errors by the person submitting them, and even the likelihood of deliberate distortion should not be overlooked. Nevertheless, they appear to be of sufficient accuracy for the types of analysis which are attempted here.

Somewhat more troublesome is the fact that time records are not always kept the same way, so that some of the differences observed may be artifactual. For example, to anticipate the detailed discussion below, it is often difficult to separate the actual interview from time spent in the home in introduction and in general conversation.

The nature of the task, and of the organization conducting the field work also have an influence on the time allocations. This will be discussed when the tables are analyzed, but a discussion of individual interviewer differences is left to a subsequent paper. Finally, however, it should be noted that even with all the possible reasons for non-comparability, there do appear to be great similarities between survey organizations and between interviewing and other field occupations, and it is these similarities, rather than the differences which are the most significant findings presented.

National Opinion Research Center Interviewer Time Allocation

Table 1 presents the actual time and percentage of interviewer time spent on various tasks for six National Opinion Research Center studies conducted during the period 1958-64, and for an earlier 1947 study. Since the methods used for obtaining these results were generally similar for all studies, they need only be fully described once. The differences which are observed are not due to different methods of data gathering, but to the peculiarities of the particular studies.

The two main sources of information on time spent by National Opinion Research Center interviewers are the questionnaire itself, and the Interviewers' Time Report. At the beginning and end of each questionnaire the interviewer records the time so that length of interview is known. While interviewers are instructed to enter the times concurrently with the interview, there is some indication that there are two possible sources of error in these figures; some interviewers record the times that they enter and leave the house, while some interviewers forget to enter the times during the interview and fill them in by recall when they edit their questionnaires. In both of these cases, the tendency is for the interviewer to overstate the length of the interview by including non-interviewing time in the household such as waiting and post-interview conversation. In addition, this method does not account for any interruptions in the middle of an interview. For interviews which average about an hour or longer, these errors do not appreciably change the percentages shown in Table 1, but for short interviews (such as Census Enumeration) these errors could be large.

The other source of information on interviewer time allocation, the Interviewers' Time Report, is the form routinely used by interviewers to report their time so they can get

paid. The Time Report is divided into three sections: Travel, Interviewing and Other Time. "Other Time" includes study, clerical and editing time.

Study time is defined as the time spent by the interviewer in reading the instructions and specifications for a study and in doing any practice interviews required. It does not include any time spent in personal training by a field supervisor or in group sessions. When these personal training sessions are held, the interviewers involved are generally paid a fixed amount.

Clerical time is time spent filling out forms, including the Time Report, and in sending and receiving mail in connection with a study. It includes trips to and from the Post Office to pick up packages or mail completed questionnaires. It may also include the mailing of special letters explaining the purposes of a survey to respondents, if this is done.

Editing time is the time spent by the interviewer after the interview to insure that her writing is legible, that no questions have been erroneously omitted, and that any ambiguous answers are clarified. There is great variability between interviewers on this category, since some interviewers use shorthand during the interview and transcribe later. There is some difficulty in separating out editing time from travel time within a segment. Many interviewers do their editing while waiting for the next respondent to become available, and thus their time sheets show a combined category of editing and waiting. In these cases, the time spent editing a questionnaire is estimated from those questionnaires of the interviewer which were edited when no waiting time was involved.

Travel to Segment is derived from the Travel column on the Time Report. It includes time to the segment from the interviewer's home and return. It also includes any travel time from one segment to another. It is generally not too difficult to separate this time from the time spent by the interviewer within the segment.

Travel in Segment is defined as all time in a segment not spent on the actual interview. Travel in segment includes all waiting time, and time in a respondent's home spent in conversation not part of the interview, as well as time spent locating the proper house in the segment and knocking on doors. Also included here is the time the interviewer spends on the telephone making appointments for interviews. This type of travel time is not always directly noted by interviewers filling out the present time sheet. It is sometimes included under travel time, sometimes under interviewing time and sometimes under other time. In coding the Time Reports, cross-checks are made with questionnaires. If the interviewer combines waiting time or other time within the segment with the interview, the length of the interview as obtained from the questionnaire is subtracted from the total time shown and the balance is called "travel in segment." Even where the interviewer has separated her time, cross-checks still are made to the questionnaire to insure that dates and times agree. If not, the normal procedure is to adjust the Time Report to the questionnaire since times in the questionnaire were presumably filled out immediately while the Time Report is generally filled out later.

Special Interviewer Records

Segment Call Record

Because of difficulties encountered with the Time Report a new method of accounting for interviewer time was used on the last probability sample study (Study 3) described in Table 1. For this study, a very much simplified time sheet was used in combination with a segment call record sheet. The segment call record, which is kept by the interviewer while she is in the segment, records the times for each of the following steps in the interviewing process:

Travel to and from segment
Travel within segment
Waiting for respondent
Seeking or talking with respondent
Actual interviewing.

Naturally, a cost analysis of interviewer time using this form is far easier and more exact than one which uses recall on time records. On the other hand, some interviewers found the record keeping of this form to be burdensome. Currently, the segment call record is being used for those studies where detailed cost analyses are required, but is not used routinely.

Interviewer Log

The results of the 1947 quota sample shown as Study 7 in Table 1 were based on an interviewer log which was developed especially for that study. Data are not available separately on the amounts of study, clerical, editing, and travel time to segments. The analysis of the field operations on this study were done by Stephan and McCarthy and are found in their book, Sampling Opinions.[2]

Interviewer Time Allocation at the Census Bureau and Survey Research Center

1960 Census

Table 2 gives the percentage of enumerator time spent on various tasks, both for the 1960 Census and the Current Population Survey. The figures have been re-worked from the Census documents to make them as comparable as possible to the data in Table 1. Naturally, different methods make full comparability impossible. Thus, the training for the 1960 Census was done on a personal basis, so there is no Study item included. The Current Population Survey also has no provision for Study since this is not measured on CPS Time Sheets. CPS interviewers are paid a

fixed amount for studying any special instructions sent them.

The 1960 Census Results are found in Enumeration Time and Cost Study.[3] During Stage 1 of the enumeration, information was obtained on five characteristics for each member of the household and for ten characteristics of the housing unit. If the household had filled in an Advance Census Report form, the enumerator transcribed the information from the form to the enumeration book; if not, he obtained the responses by questioning the household member.

At one-fourth of the housing units, enumerators left additional forms to be filled out and mailed. During the Stage II enumeration, the enumerator received all the individual questionnaires which were mailed in, and made additional visits or phone calls to obtain missing information.

Information on enumerator activities was obtained by having a Records Clerk accompany randomly selected enumerators and record what they did and how long it took. The Census Bureau made no attempt to estimate what the effect of the Records Clerk was on the enumerator. Clearly, it led to more accurate recording of time than would a time sheet, but it could also have influenced the enumerator's work habits.

Transcription to the various FOSDIC schedules was not measured in the field, but was estimated by the Census Bureau from established standards. In general, this work was done after the canvass was completed. Editing time (Field Review) was defined to include the quality control inspection of the enumerator's work by a crew leader or field reviewer, the time it took the interviewer to travel to the field review, the time the interviewer waited for the reviewer and the time spent on payroll computation.

Travel time to the segment was an insignificant part of the enumerator's task and is not even shown for stage II. For stage I it averaged 17 minutes one way or 34 minutes round trip per average assignment of 32. Thus the average travel time to segment per household was about 1 minute.

Current Population Survey

Interviewer Allocation of time on the Current Population Survey is found in Miscellaneous Statistical Data Memorandum No. 3 of the Bureau of the Census.[4] In general, the definitions used there are comparable to those of the National Opinion Research Center. The data for the CPS are obtained from interviewer time records which were kept to obtain this detailed information. The standard CPS time sheet asks only for starting and finishing times each day.

Survey Research Center

The data in Table 3 are from a paper by Goodman and Cannell of the Survey Research Center, University of Michigan.[5] The data were compiled from detailed time and expense reports submitted regularly by interviewers. As at the National Opinion Research Center, these were the same records which were used to compute the pay an interviewer received. Both surveys were national probability samples, with the interview lasting 45 minutes to an hour. On the first study the interviewer took notes and transcribed these notes afterwards. On the other survey, answers were written on the questionnaire during the interview.

Comparison of the Various National Opinion Research Center Studies

This section will discuss the reasons for the differences in interviewer allocation of time on the various National Opinion Research Center studies. No attempt is made here to examine differences between interviewers on the same study. This analysis is left for a later paper.

Table 1 suggests that while actual interview times vary considerably from survey to survey, percentages are more stable. Study and editing time would normally be expected to increase with the complexity of a study, as would the length of interview. Travel time remains fixed with respect to length of interview, but is larger for probability samples. Some more specific comments on reasons for variability for each task may indicate how the nature of the assignment determines interviewer time allocation.

Study Time

Study time for a survey depends mostly on the complexity and length of the specifications. There is a correlation of .94 between length of specifications and actual study time required for the six studies. Roughly, each page of specifications requires on the average about five minutes of study time with an additional fixed time of an hour regardless of size. While these figures are crude, since they are based on only six studies, they do give some basis for suggesting to the interviewers how much time should be allocated to studying.

The size of specifications for the six studies were:

Study	1	2	3	4	5	6
Pages of specifications	118	97	42	14	14	7
Total study time (minutes)	704	424	172	199	178	85

Clerical Time

Interviewer time spent on clerical tasks can be almost completely determined by the field department.

The variability in the clerical times seen in Table 1 is due to the different tasks required of interviewers. For example, on the first study in Tables 1 and 1A, interviewers were required to use stamps to mail packages of completed

interviews back to the office instead of using business reply envelopes which have since become standard. This meant frequent trips to the post office to have the packages weighed and to buy stamps as well as additional entries on the time sheet. On the second and seventh studies in Tables 1 and 1A, clerical times included the filling out of special records showing how interviewers spent their time.

Generally, it is more efficient to have clerical jobs done in a central office. This suggests that whenever possible, questionnaire kits and other interviewer material should be assembled before mailing, rather than by the interviewer, and that interviewer trips to the Post Office be avoided by putting stamps on mailing envelopes in advance or by paying postage when questionnaires are returned.

If one were only concerned with reducing clerical time, the use of detailed logs of interviewer time should be avoided. These records are very valuable, however, in the kinds of studies discussed in this paper.

Editing Time

Editing time is directly related to the length and difficulty of the questionnaire. There is no direct measure of this, but the length of time required to conduct the interview is a good indication of this. Editing time is correlated .96 with interviewing time, and generally requires about one-third as much time as does the interview for the six National Opinion Research Center studies in Table 1.

Travel to and in Segment

Travel to and in segment depends on the number of trips required which is partly a function of the cluster size and call-back instructions. Naturally the location of the interviewing staff in relation to the segments is also important, but this is usually unchanged from survey to survey. Since travel costs form a large part of the total costs of an interview, they will be discussed in detail in a later paper which will examine the effects of location and size of primary sampling unit as well as call-back instructions and cluster sizes.

The comparisons between probability samples and quota samples in Tables 1 and 1A indicate some differences, but the magnitude of these differences is smaller than might be expected. For Travel in Segment, there is hardly any difference between the probability and quota samples. For Travel to Segment quota samples require somewhat less time since call-backs are not required and the number of trips is reduced. The quota samples in Studies 4-6 are those which specify the starting address for an interviewer, and the path she must follow, but do not require her to return to a dwelling unit if no one is available. In addition, these studies all specified the proportion of employed and unemployed women to be interviewed, as well as the proportion of men over and under 30 years of age.

In contrast, the 1947 quota sample imposed no geographic limitations, but required the interviewer to obtain a specified number of respondents in each of several rent levels. The high proportion of travel time on that study was probably due to the fact that the rent quotas used at the time were out of date, requiring a long search by the interviewer to find respondents in the lowest rent levels. In addition, the search procedure of interviewers at the time was inefficient, since many tried to fill their lower rent levels by searching in higher rent neighborhoods.

Interviewing

The length of time spent interviewing depends on the length and complexity of the questionnaire. So far as is known, there is no good way to estimate how long it will take to administer a questionnaire without actually pre-testing it. Table 1 shows, however, that the percentage of time spent interviewing is fairly stable for the first six National Opinion Research Center surveys, varying only from 32 to 41 per cent. Only for the 1947 quota study does the percentage of interviewing time drop to 21 per cent. There are two reasons for this. The first is the large percentage of time spent traveling which was discussed above. Even more important is the fact that this 1947 interview took only about 15 minutes in contrast to the other studies where the interview was three or four times longer. It is clear that short interviews of a half hour or less result in less time spent interviewing, but there is no increase in this percentage as interviews get longer than about 45 minutes. The very long interviews make it hard for the interviewer to complete more than a single interview per trip, and this balances the increase of the ratio of interviewing time to travel time per trip.

Comparison of National Opinion Research Center, Census and CPS

The chief difference between the National Opinion Research Center studies and the CPS and Census enumeration is the length of interview. The average National Opinion Research Center studies in Table 1 are about an hour long while the Census enumeration was less than ten minutes and the CPS interviews run about 15 minutes. This explains why the National Opinion Research Center interviewers spend slightly more of their time on actual interviews. Thus, for the 1960 Census the actual time spent interviewing was only 5.4 minutes in Stage I and 2.8 minutes in Stage II. With such short interviews, the amounts of time spent in the house before and after the interview were large relative to the actual interview. If one included all time in the house as interviewing time, then the Stage I percentage of interviewing time would be 45 per cent instead of the 30 per cent shown in Table 2 and the Stage II percentage would be 28 per cent instead of 23 per cent. Perhaps these percentages as well as those in Table 2 should be considered when making comparisons to the National Opinion Research Center and Survey Research Center results.

Of greater significance than the differences

are the similarities. Note the percentage of time spent interviewing on the CPS which follows a strict probability sample design as compared to the three National Opinion Research Center studies using probability samples. The CPS figure of 31 per cent of time spent interviewing is quite close to the three National Opinion Research Center percentages of 32 per cent, 33 per cent and 38 per cent. This close agreement between different survey organizations on percentage of time spent interviewing is also confirmed by the data of the Survey Research Center on Table 3.

It can be seen that for Survey B, which is the more usual type of survey, the Survey Research Center percentage of interviewing time, 32 per cent, is in good agreement with the CPS figure of 31 per cent and the National Opinion Research Center percentages of 32 per cent, 33 per cent and 38 per cent. For Survey A, if interviewing and editing are combined, they account for 49 per cent of the time of Survey Research Center interviewers. Similarly on the three National Opinion Research Center probability sample studies, interviewing and editing combined account for 43 per cent, 44 per cent and 49 per cent of the total time.

To summarize these results: Although there are substantial differences between the requirements for different studies, and although different survey organizations have different requirements and measure interviewer time allocation in different ways, there is a surprising uniformity in the percentage of time which interviewers spend on their chief task--interviewing. For probability samples, it is a safe generalization that interviewers spend about one-third of their time interviewing and two-thirds of their time on less critical tasks.

How this compares to other occupations is the subject of the next section of this paper. It will be seen that these results for interviewers are remarkably similar to those of other field occupations.

Other Field Occupations

Sources of Data

Salesmen

Tables 4 and 5 show how salesmen, social workers, probation officers and public health nurses allocate their time to various tasks. Table 4 summarizes five different reports on salesmen. The data on wholesale drug salesmen is from Davis' book Increasing Wholesale Drug Salesmen's Effectiveness.[6] The time study was conducted by having an observer spend a complete day with a salesman from the time he left his house or hotel in the morning until he returned at night. Since Davis felt that the work of the salesman would be conditioned by the knowledge he was being timed, the salesman was not told of the time-study. Rather the salesman was told that notes were being taken on the methods he used for selling, and how effective they were. A total of 38 country salesmen and 32 city salesmen were observed.

Selling Time, which corresponds to Interviewing Time, included promotional selling, dealer assistance, want book selling, sales promotion and collection and adjustment. Travel In is the time in the store spent waiting at the start of an interview or if interrupted, general conversation and idle time. Travel To includes travel and meals. Clerical Time is the time spent in writing up orders and phoning orders into the wholesale house.

The second study which deals with oil company salesmen is from a study by the Atlantic Refining Company reported in Salesweek.[7] Details of how this study, and the other salesmen studies in Table 4 were conducted are not available. Ordinarily, one would not be willing to give much credence to these studies, except that they all seem to say about the same thing. The study of carpet salesmen is cited by Brown, England and Matthews in their Problems in Marketing,[8] while the study of miscellaneous salesmen is also in the Salesweek article mentioned above.[9] It is based on a study of 255 salesmen in 19 different fields. The data on steel salesmen are from the personal files of Allen Jung of the University of Chicago who obtained them while working in the steel industry.[10]

Social Workers

Table 5 shows the time allocation of social workers and public health nurses. Three different studies of social work occupations show great stability in the percentage of time spent interviewing.[11] The first study deals with probation officers in Contra Costa County, California.[12] Individual deputies kept daily logs for a seven week period, and the tasks were coded using the following classifications: Interviewing included personal and phone contacts with the probationer; Study included conferences with supervisors and with other deputies, psychologists, etc; Clerical included all office paper work; Travel appears to be what would be called travel to segment by interviewers; Miscellaneous most closely corresponds to travel in segment for interviewers. The probation officers are the only male group of social workers in Table 5, but they are no different than the other two groups.

The second study concerns 37 caseworkers of the Jewish Child Care Association of New York.[13] They kept tally sheets for 12 working days recording meetings and conferences, telephoning, paper work, dictation and travel. The actual interviews and record reading in preparation for them were not recorded separately, but were obtained by subtraction. Thus, there is no way to separate out interviewing time from what we would call study time. In Table 6, Conference Time is treated as Study Time. Dictation and Clerical work are both included under clerical, although Dictation from notes which accounts for 13.5 per cent of the total time worked could correspond to Editing shorthand questionnaires for

interviewers. The 9 per cent of the time spent on the telephone was classified as Miscellaneous, although it might also be compared to the interviewer's travel time in segment, since it involved making appointments for visits.

The final study by the Bureau of Management Analysis of the State of California Department of Social Welfare concerns independent adoptions caseworkers.[14] It is based on returns of a questionnaire to seven agencies asking them to estimate time spent on various tasks. Since adoption is a complicated process, each of the items in Table 5 is the sum of many individual steps. The study and editing tasks are combined because the record of one step becomes the material to be studied for the next; dictation, however, is classified as a clerical task.

Study time includes pre-petition activity, preliminary steps, review of case material after interviews, and conferences with supervisors, attorneys and other professionals. Clerical includes all dictation and preparation of files. Interviewing includes interviews with the adopting parents, the natural parents, the child, and with other family members if needed. Travel time includes actual time spent traveling and time spent telephoning to arrange for appointments.

Public Health Nurses

Two studies are available on how Public Health Nurses spend their time. The first study is by far the more comprehensive one.[15] It is a nation-wide study of 11 public health nursing agencies conducted by the Department of Public Health Nursing of the National League for Nursing. Each agency did two analyses 5 years apart using special forms kept by the nurses. Although no averaging is done in the report, the figures in Table 5 are the simple averages of the 22 numbers. Total home visiting time is divided into three parts: Actual time in the home, travel time, and preparation or postactivity. Staff education is classified as study time, while community activities are put into miscellaneous.

The second study is from Nursing Outlook and presents information on a study of Georgia Public Health Nurses.[16] One hundred eight Nurses in five local health departments kept daily time records for one week. For the visiting nurses, time was divided into actual time in the home, travel time, and preparation and postactivity.

Time Allocation

Salesmen

Table 4 shows that about 37 per cent of a salesman's time is spent in actual selling with only small variation around this average. Only the steel salesmen are substantially below average, and while it is not clear why this is the case, it may be due to the fact that their customers are more widely separated.

What is surprising is that salesmen do not appear to be much different than survey interviewers in the way in which they allocate their time. This would suggest that method of payment, commission vs. hourly rate, probably does not have a very large effect on the percentage of time either interviewers or salesmen spend on their main task. The difference of five percentage points between the time spent selling and the time spent interviewing is probably a maximum estimate of the effects of changing the compensation system for survey interviewers.

Social Workers

The time spent in interviewing on all three social work occupations averages 37 per cent and varies only from 35 to 39 per cent. It is also striking to note that this is exactly the same average percentage of time spent selling by salesmen, and is very close to the percentage of time spent interviewing by survey interviewers. Before speculating as to why these percentages are so close, data will be presented for Public Health Nurses who show a sharply different pattern.

Public Health Nurses

Public Health Nurses spend a substantially greater part of their time on in-home care (which corresponds to interviewing or selling) than do any of the other occupations studied.

It can be seen that nurses spend better than half their time (54-55 per cent) in their chief function as compared to the other occupations which average about one-third time. Table 6 provides a concise summary of the results of the earlier tables. Certainly one is led to speculate as to reasons why interviewing, selling, and social work show such strong similarities and why nursing differs. These speculations are presented in the final section.

Similarities in Various Field Occupations

In considering why interviewing, selling, and social work show such similar patterns certain reasons can probably be rejected. It might be argued that the agreement is coincidental, but this seems extremely unlikely given the fact that 20 different studies are compared. While the argument that this is a chance occurrence can never be fully discarded, there does appear to be a reason which has a more rational appeal.

Since there is some ambiguity in the data for all these studies, it might be thought that this agreement is artifactual--that the summarization of the data was done in such a way as to bring them into line with a preconceived hypothesis. This does not seem to be the case. The greatest ambiguity in the data are in categories other than interviewing. While there is often a question as to whether something should be classified as study, clerical or miscellaneous it is generally easy to separate the actual interviewing or selling from travel or waiting time in the reports analyzed, although this does not insure the initial accuracy of these reports. In addition, the results shown above differed

substantially from the initial hypotheses. Prior to data collection, it was felt that there would be real differences between interviewers, social workers, and salesmen. Using a monetary reward framework, it was felt that salesmen would spend the most time in actual selling since their commissions depended on the number of contacts they made while interviewers would spend the least time in actual interviewing since the longer it took them in noninterviewing activities such as travel and study, the more they received. Clearly, this indicates that method of payment is not the reason for the similarities.

Nor does it seem likely that the characteristics of the persons in these occupations are enough alike to cause these similarities. Sex is not important since interviewers are mostly women, salesmen are men, and social workers are both (at least, in this analysis). Education is not an important variable since social workers generally have some graduate work, interviewers some college, and salesmen are generally high school graduates.[17] Neither age nor family status are identical--interviewers tend to be middle-aged women with children in or through with school, while social workers tend to be younger.

The reason for the similarities seems to lie in the job situation itself. The three occupations, interviewing, selling, and social work are all highly stressful in their most crucial component--the personal contact with the respondent. The interview has generally been arranged at the request of the interviewer rather than the respondent, and there is always the possibility of a slammed door or a curt refusal. Even when the interview has started, the interviewer is always conscious of the effort to keep it flowing smoothly to a successful conclusion. The process can be so wearing emotionally that the interviewer needs time to recuperate and so other activities are included as part of the job, be they traveling, waiting, studying or clerical tasks.

It may be argued that social workers are not in the same fix as are interviewers and salespeople, but for the three examples given in this paper there do appear to be real reasons for tension between the social worker and the respondent, and the social workers have come to expect this tension. The data on the visiting nurses seem to confirm this conclusion by contrast. The visiting nurse is almost always invited into the home to give medical care, and does not expect to overcome any resistance in getting into a home or during the treatment. Since there is less stress on her, she is able to spend a larger part of her time in the home.

If this is a valid conclusion, it has this consequence. It suggests that manipulation of compensation or of details of the job would have very little effect on the percentage of time which the interviewer spent on the interview. The only way to increase time spent interviewing would be to reduce tension, but this may not be possible. It may be that certain individuals are less sensitive to this tension, and are thus able to spend greater parts of their time on the actual interview. These people may not make the best interviewers, however, since this lack of sensitivity could result in more interviews of lower quality. This area too is the subject of research by National Opinion Research Center and will be discussed in a later paper.

This analysis is not intended to suggest that each day will be allocated the same way by workers in field occupations. Some days may be spent entirely in interviewing, while on other days no interviews may be conducted. It is suggestive, however, that a majority of National Opinion Research Center interviewers never spend more than four hours per day interviewing, either on probability or quota sample studies.

Further Research Suggested

The generalizations presented above suggest several areas of additional study. It is not clear what part of the tensions are due to the efforts required to keep the interview going, and what part to the initiation of the interview with a possibly unwilling respondent. It should be possible to obtain records or devise experiments where appointments have been made for the interviewer. If interviewer time allocation did not then change, one would conclude that the tensions were primarily due to interpersonal contact. On the other hand, there are cases which require an initial contact with a respondent, but no additional interactions. Such tasks as store auditing and leave and pick up questionnaires are examples. Again one would look for changes in interviewer time allocation as indicating effects of interpersonal contacts.

It would be extremely useful to obtain data on other occupations where a great deal of interpersonal contact is required, but where the meetings are not initiated by the interviewer. Thus, employment interviewers, sales clerks, and school teachers come to mind as groups worth investigating. The time allocation of people in occupations with little interpersonal contacts such as scientists and engineers would also be illuminating.

FOOTNOTES

[1]Herbert Hyman, William J. Cobb, Jacob J. Feldman, Clyde W. Hart, and Charles Herbert Stember, Interviewing in Social Research (Chicago: The University of Chicago Press, 1954).

[2]Frederick F. Stephan and Philip J. McCarthy, Sampling Opinions (New York: John Wiley & Sons, 1958).

[3]United States Censuses of Population and Housing 1960, Enumeration Time and Cost Study (Washington: U. S. Bureau of the Census, 1963).

[4]I am grateful to Mr. Dean Webber, the author of this memo, for making it available to me, and also for his useful comments and suggestions.

[5]Roe Goodman and Charles F. Cannell, "Sampling Errors and Components of Interview Costs in

FOOTNOTES--Continued

Relation to Sample Design" (mimeographed, Ann Arbor: Survey Research Center, University of Michigan, no date).

[6]James H. Davis, Increasing Wholesale Drug Salesmen's Effectiveness, (Columbus, Ohio: Bureau of Business Research, Ohio State University, 1948).

[7]Salesweek, December 12, 1960, pp. 12-13.

[8]Milton P. Brown, et al., Problems in Marketing (New York: McGraw-Hill, 1961).

[9]Salesweek, December 12, 1960, pp. 12-13.

[10]Personal communication from Allen Jung, Graduate School of Business, University of Chicago.

[11]I am indebted to Edward Schwartz of the School of Social Service Administration, University of Chicago, for bringing this data to my attention and making it available to me.

[12]Contra Costa Probation Department, "Time Study" (typewritten, Martinez, California: 1959).

[13]Jewish Child Care Association of New York, "Time Study, May, 1952" (mimeographed, New York: October 21, 1952).

[14]Department of Social Welfare, State of California, Independent Adoption Yardsticks (Sacramento: September, 1956).

[15]Department of Public Health Nursing, National League for Nursing, A Comparative Study of Costs in Eleven Public Health Nursing Agencies (New York: National League for Nursing, 1956).

[16]Katharine Akin, "Time Study of Georgia Public Health Nurses," Nursing Outlook, X (1962), pp. 544-46.

[17]Davis, pp. 41-53.

TABLE 1

PERCENTAGES OF INTERVIEWER TIME SPENT ON VARIOUS TASKS AND ACTUAL TIMES FOR SEVEN NORC STUDIES

Task	Percentage of Time Spent							Actual Times/Interview in Minutes (Study and Clerical Time is Total/Study)						
	Probability Samples			Block-Quota			1947 Quota							
	1	2	3	4	5	6	7	1	2	3	4	5	6	7
Study	17	8	4	13	12	9		704	424	172	199	178	85	-
Clerical	8	7	1	2	10	4		307	366	73	26	150	39	-
Editing	11	11	11	13	9	12	47	39	11	24	23	14	15	-
Travel to Segment	21	22	29	17	17	18		74	21	67	29	27	23	-
Travel in Segment	11	19	17	15	14	16	32	40	19	39	27	22	20	35
Interviewing	32	33	38	40	38	41	21	114	32	86	70	60	52	23
Total	100	100	100	100	100	100	100							
Total Interviews	2,115	15,690	2,563	1,470	1,449	1,688	1,223							
Total Interviewers	186	295	119	161	160	231	88							

TABLE 2

PERCENTAGES OF ENUMERATOR TIME SPENT ON VARIOUS TASKS 1960 CENSUS[a] AND CURRENT POPULATION SURVEYS[b]

Task	1960 Census		CPS
	Stage I	Stage II	
Clerical (Transcription)	21	38	20
Editing (Field Review)	6	7	-
Travel to Segment	6	-	35
Travel in Segment	30	12	14
Interviewing	30	23	31
Miscellaneous	7	20	-

Source: [a]Tables 1, 14, 24; pp. 27, 32, 36, Enumeration Time and Cost Study.

[b]Bureau of the Census, Miscellaneous Data Memorandum No. 3, dittoed September 17, 1958.

TABLE 3

PERCENTAGES OF INTERVIEWER TIME SPENT ON VARIOUS TASKS ON TWO SURVEY RESEARCH CENTER STUDIES

Task	Survey A	Survey B
Study, Clerical and Miscellaneous . .	21	24
Editing	26	-
Travel To and In Segment.	30	44
Interviewing.	23	32

Source: Roe Goodman and Charles F. Cannell, "Sampling Errors and Components of Interview Costs in Relation to Sample Design," (mimeographed, Ann Arbor: Survey Research Center, University of Michigan).

TABLE 4

PERCENTAGES OF SALESMAN TIME SPENT ON VARIOUS TASKS

TASK	Wholesale Drug[a]		Oil[b]	Steel[c]	Carpet[d]	Miscellaneous[e]
	City	Country				
Study (Preparation). . .	-	-	-	-	-	19
Clerical	4	2	-	6	-	-
Travel To.	33	32	37	72	-	-
Travel In.	26	25	16		-	45
Selling.	37	41	45	22	40	36
Miscellaneous.	-	-	2	-	60	-

[a]James H. Davis, Increasing Drug Salesmen's Effectiveness (Bureau of Business Research, Ohio State University, Columbus, Ohio, 1948), p. 59.

[b]Survey of Atlantic Refining Company Salesmen, reported in Salesweek, December 12, 1960, p. 13.

[c]Personal communication from Allen Jung, Graduate School of Business, University of Chicago.

[d]Brown, England and Matthews, Problems in Marketing (McGraw-Hill, 1961).

[e]Salesweek, December 12, 1960, pp. 12-13.

TABLE 5

PERCENTAGES OF TIME SPENT ON VARIOUS TASKS BY SOCIAL WORKERS AND PUBLIC HEALTH NURSES

Task	Social Workers			Public Health Nurses	
	Probation Officer[a]	Foster Home Placement[b]	Independent Adoption[c]	National[d]	Georgia[e]
Study (Conference)	9	13	24	2	-
Clerical (Record Keeping).	22	24	20	23	13
Travel	15	16	21	20	32
Interviewing (In-Home Care)	39	38	35	54	55
Miscellaneous	15	9	-	1	-
Total	100	100	100	100	100

[a]Time Study (Martinez, California: Contra Costa County Probation Department, 1959), typewritten.

[b]Jewish Child Care Association of New York Time Study, May, 1952 (mimeographed, New York: October 21, 1952).

[c]Department of Social Welfare, State of California, Independent Adoption Yardsticks (Sacramento: September, 1956).

[d]Department of Public Health Nursing, National League for Nursing, A Comparative Study of Costs in Eleven Public Health Nursing Agencies (New York, 1956).

[e]Katherine Akin, "Time Study of Georgia Public Health Nurses," Nursing Outlook, X (1962), pp. 544-46.

TABLE 6

COMPARISON OF TIME SPENT INTERVIEWING, TRAVELING, AND IN OTHER TASKS BY SURVEY INTERVIEWERS AND OTHER FIELD OCCUPATIONS

Occupation	Interviewing	Traveling	Other	Total
Interviewers:				
National Opinion Research Center:				
Probability Samples	34	40	26	100
Block-quota Samples	40	32	28	100
Census	26	24	50	100
Current Population Survey	31	49	20	100
Survey Research Center	28	37	35	100
Salesmen	37	52	11	100
Social Workers	39	17	44	100
Public Health Nurses	55	26	19	100