

TESTING ALTERNATIVE QUESTIONNAIRES FOR THE CURRENT POPULATION SURVEY

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I. INTRODUCTION

The Current Population Survey (CPS) is the primary source of information on labor force characteristics of the U.S. civilian noninstitutional population. The CPS is a monthly survey of approximately 60,000 occupied housing units. Households are interviewed for four consecutive months, are out of sample for eight months, then interviewed again for four consecutive months. Following the eighth month in sample, the household is dropped from the sample. A revised questionnaire that can obtain more precise and higher quality information on labor market status is a key need for the CPS. As part of the CPS redesign activities being conducted by the Bureau of Labor Statistics and the Census Bureau, research and development is underway leading to the introduction of a revised questionnaire in January 1994.

This paper contains background on the CPS questionnaire redesign planning, a summary of the activities completed during development of the revised questionnaire, an outline of the design and analysis plans for the current field test of proposed questionnaires, and the timetable for questionnaire implementation.

II. PLANS FOR QUESTIONNAIRE REVISION

The current CPS questionnaire has remained essentially unchanged since the last major revision in January 1967. The 1967 revisions followed, in part, recommendations of the 1962 President's Committee to Appraise Employment and Unemployment Statistics (the Gordon Committee). Since that time, many additional revisions have been proposed, most notably by the National Commission on Employment and Unemployment Statistics (the Levitan Commission). The Commission's final report Counting the Labor Force, issued in 1979, recommended a number of changes including revising the definition of discouraged workers.

To test these and additional questionnaire changes recommended by the Bureau of Labor Statistics (BLS) and the Bureau of Census, the Methods Development Survey (MDS) program was established in the late 1970's. This program has conducted field experiments comparing alternative questionnaire versions, respondent rules, and collection modes. No major changes in the CPS questionnaire have been implemented, however, due to the lack of funding for a large overlap sample to assess their effect on the CPS data series. Current efforts in questionnaire redesign resulted

from joint BLS and Census Bureau planning for a major redesign of all aspects of the CPS. The increasing complexity of the labor market requires that broad, relevant, and useful data are provided to policymakers. New data collection technologies such as computer-assisted telephone interviewing (CATI) and computer-assisted personal interviewing (CAPI) provide more efficient and accurate means of collecting survey data. Interdisciplinary approaches which integrate survey methodology, psychology, sociology, and anthropology, have broadened the capabilities in questionnaire testing and development.

BLS and Census made the decision to proactively maintain CPS as a "leading edge" survey by planning and implementing modifications to the survey to address these considerations and others raised by joint subcommittees. A major component of the resultant plan, summarized by Butz and Plewes (1989), is the development and implementation of a revised questionnaire.

In 1986 a joint BLS and Census Bureau task force was convened to identify conceptual and wording problems in the current questionnaire, to suggest possible solutions for those problems identified, and to develop a plan for research to improve and test the design of the questionnaire and related survey procedures. Recommendations from the task force (BLS, 1986) have resulted in laboratory research leading to the development of alternative versions of the questionnaire for field testing.

The CPS redesign plan calls for the introduction of a new questionnaire in January 1994, following field testing and a one and one-half year overlap sample to estimate the effect on the labor force estimates.

III. DEVELOPMENT OF A REVISED QUESTIONNAIRE

This section provides the objectives of the questionnaire revisions, a summary of the laboratory research conducted on the basis of the 1986 BLS-Census Questionnaire Redesign Task Force recommendations and the key features of the alternative questionnaires.

A. Objectives

The objectives of the CPS questionnaire redesign are five-fold: (1) better operationalize existing definitions; (2) reduce the potential for response error due to questionnaire-respondent-interviewer interaction; (3) implement definitional changes within the labor force classifications; (4) expand the

labor force data available from the CPS; and (5) utilize capabilities of computer-assisted interviewing for improving data quality.

1. Existing Definitions

Identification of labor force activities through the CPS questionnaire often requires respondents to understand the labor force concepts and terms used. Conceptual and definitional problems with the current questionnaire were documented by the BLS-Census Questionnaire Redesign Task Force (1986) and looked at in more detail by Martin (1987). Based on these reports and on resulting research into problematic concepts (see section III.B), efforts have been made to strengthen the questionnaire to improve the measurement of certain components of the labor force and associated concepts. In most cases, improved measurement is being accomplished through construction of questions for the consistent application of classification criteria.

Among the major concepts targeted for improvement are: (1) on layoff, in which expectation of recall is part of the operational definition, but may not be part of a respondent's definition; (2) working, in which marginal activities such as unpaid family work of 15 hours or more in the survey week, are included in the operational definition but may not be considered as work by respondents; and (3) job search, in which passive job search methods may be inappropriately coded as active job search by interviewers, leading to possible misclassification of labor force status.

2. Reduction of Potential for Response Error

The collection of high quality data requires the following: (1) survey questions collecting information necessary for and consistent with survey classifications; (2) respondents understanding the questions being asked, having access to the information being requested, and reporting information accurately; (3) interviewers reading questions as worded, and interpreting and recording responses correctly.

In redesigning the CPS questionnaire, the BLS and Census Bureau have attempted to develop questions that will lessen the potential for response error. Among the approaches used are: (1) shorter, clearer question wording; (2) splitting complex questions into two or more separate questions; (3) building concept definitions into question wording; (4) reducing reliance on volunteered information; (5) explicit and implicit strategies for the respondent to provide numeric data on hours, earnings, etc.; and (6) the use of revised pre-coded response categories for open-ended questions.

3. Definitional Changes

In its September 1979 final report, Counting the

Labor Force, the Levitan Commission recommended: (1) a change to an objective measure for the identification of discouraged workers, based on recency of job search, current availability, and desire for work; and (2) a change to a 35-hour per week standard for full-time work to determine whether unemployed persons are looking for full- or part-time work.

Additional definitional changes have been identified by the BLS for incorporation into the CPS. Among these are the addition of objective measures for economic part-time workers, based on current availability and desire for full-time work, and the issue of identifying persons waiting to report to a new job.

4. Data Expansion

The CPS questionnaire is designed to provide detailed labor force information on individuals with minimum respondent burden in terms of the time required to participate in the survey. The data available from the CPS are being expanded through the questionnaire redesign. Through refinements in the survey flow, additional data collection is being built into the questionnaire while attempting to control the time required for the interview.

Among the data expansions are: (1) the collection of usual hours in the full sample (based on a recommendation from the Levitan Commission) -- currently estimates of usual hours are collected in only one-fourth of the sample; (2) collection of discouraged worker data in the full sample -- currently discouraged workers data are collected from only one-fourth of the sample; and (3) the identification of multiple jobholders -- currently multiple jobholders are not measured in the CPS.

5. Automated Collection Capabilities

The CPS redesign plan, calls for data collection to be completely automated by January 1994. Survey data will be collected using an integrated CATI/CAPI approach. This approach will provide for decentralized collection by interviewers using CAPI for first and fifth month-in-sample households (which are currently collected by personal visit) and subsequent month-in-sample cases in single interviewer PSUs and for language problems, prior month noninterviews, no telephone households, etc. Approximately 25 percent of the remaining households will be interviewed from centralized CATI facilities.

Automated data collection frees the questionnaire design from the limitations imposed in a paper and pencil environment. Complicated skips, respondent-specific question wording, and carry-over of data from one interview to the next are all possible under such a system.

Among the other applications of automated

collection capabilities designed into the alternative CPS questionnaires are: (1) the use of dependent interviewing for industry, occupation, and duration of unemployment data; and (2) the use of respondent specific question wording based on the person's name, age, and sex, answers to prior questions, household characteristics, and so forth.

B. Summary of Research to Date

In the 4 years since the CPS redesign planning began, the Bureau of Labor Statistics and the Census Bureau have conducted a number of cognitive research projects related to the CPS questionnaire. The overall goal of these projects has been to provide the base information necessary to guide development of a revised CPS questionnaire.

Following is a brief discussion of the salient results obtained in the recent cognitive research on the CPS questionnaire.

1. Interviewer Focus Groups

In 1987 BLS, in cooperation with the Census Bureau, conducted several focus groups with about 120 CPS interviewers (U.S. Bureau of Labor Statistics 1988). This study was conducted to take advantage of the interviewers as a source of information about the effectiveness of questions.

While finding that the questionnaire generally functions well, the results indicate several areas which may lead to response error: (1) false reporting in the item measuring layoff; (2) respondents feeling pressures to provide an answer of working or work-related activity; (3) paraphrasing of questions and use of transitional statements not contained on the questionnaire; (4) understanding of certain terms, such as "last week"; (5) lengthy and complex questions; and (6) respondents not always sharing the BLS definitions of questionnaire terms, such as on layoff.

2. Respondent Focus Groups

In an attempt to further clarify differences which may exist between respondents and the BLS relative to definitions of phrases and words used in the CPS, the BLS and Census Bureau conducted a number of focus groups with persons considered potential survey respondents (Palmisano 1989a). The results of the focus groups confirm what was learned in the interviewer focus groups: respondents do not share the same definitions of the terms used in the CPS questions.

In particular, focus group participants had a much broader definition of "on layoff" than is used for the CPS (they felt any type of dismissal from work could be considered a layoff), and did not tend to consider unpaid activities performed to support a family business as "work."

3. Respondent Debriefing

In the final months of testing of the use of CATI for CPS, a respondent debriefing was administered. Questions were asked about respondent comprehension of the labor force questions. Respondents were also asked to classify persons in hypothetical situations (vignettes) as working, with a job, with a business, or looking for a job.

Results from the debriefing indicate that the majority of respondents classified the vignettes correctly according to the CPS definition. However, there were several vignettes in which a large minority provided an incorrect classification. Most of these involved marginal, casual, or informal work activities such as unpaid family workers, casual labor, and activities related to setting up a business (Campanelli, et al 1989).

It is also interesting to note that only 17 percent of respondents had definitions of "last week" that matched the CPS definition of Sunday through Saturday. The majority of respondents (54 percent) defined "last week" as Monday - Friday. However, this could be due to persons being on a Monday to Friday workweek.

4. Interviewer Knowledge of Concepts Test

In March 1989, a study of interviewer knowledge of concepts was administered to all CPS interviewers. The study contained a subset of the vignettes used in the respondent debriefing study discussed above. The vignettes related to work, job, business, and looking for work were included in the study. Interviewers were instructed to determine if the person described in the vignette would be classified as working, with a job, having a business or looking for work, according to CPS definitions.

The majority of interviewers classified the vignettes correctly, and length of CPS experience was strongly related to knowledge. However, it was evident that certain problem areas exist for the interviewers, particularly with regard to the classification of work activities. Most of the areas of weakness for the interviewers related to marginal, informal work activities, such as unpaid work in a family business, activities related to setting up a business, and pay in kind (Campanelli, et al., 1989).

Classification of activities related to looking for work was also problematic for interviewers. Surprisingly, over a third of the interviewers indicated that a passive job search method such as "looking at newspaper ads" should be included as a legitimate job search method.

5. Reporting of Hours Worked

BLS contracted with Westat, Inc. to evaluate the questions on hours and to suggest possible alternatives. Laboratory research was conducted using pairs of subjects and several different

questionnaires. Subjects were interviewed concurrently about themselves and then about their partner. All subjects were debriefed after the interviews and, when permitted, employers were contacted to obtain validation of hours in order to identify errors in reporting.

The results indicate that proxy respondents make more errors in reporting hours worked than self respondents, although there was no evidence of bias caused by these errors. For proxy respondents, the results indicate that there was less error with a series of questions providing a built-in recall strategy. In other words, proxy respondents who were asked about usual hours worked, lost hours and extra hours worked, and then actual hours tended to be more accurate in their report of hours worked than were other proxy respondents. It was determined that using a calendar could be a more effective method for self respondents (Westat/AIR 1989a).

6. Reporting of Industry & Occupation Descriptions

BLS also contracted with Westat to identify sources of nonsampling error in the industry/occupation (I/O) data and to recommend changes in the collection, coding and processing of the I/O data (Westat/Air 1989b). Qualitative reviews of the coding task and the interviewer tasks related to industry and occupation were conducted. In addition, testing of alternative versions of the questions was carried out.

Among the recommendations resulting from this research were the addition of a question to distinguish between wholesale, retail and manufacturing industries (to aid in coding), and a series of probing questions for occupations that are the most difficult to code without additional information.

7. Response Categorization

The CPS questionnaire contains a number of open-ended questions. For all but four of these questions (on industry and occupation), the interviewers categorize the respondents' answers into one of a set of fixed response categories.

As indicated by Fracasso (1989), accurate coding of responses may be influenced by response categories which are inappropriate, nonexhaustive, or not mutually exclusive. Fracasso examined the current categories used for the CPS and the responses typically given to the questions. She proposed and tested an alternative set of response categories for the open-ended questions. Her results clarify the use, misuse, and nonuse of current CPS response categories and indicate that improvements to the quality of field-coded responses could be made through relabelling and

redefining the response categories. The response categories used in the alternative questionnaire versions are modifications of the categories proposed by Fracasso.

8. Labor Force Status Questions

Classification of persons into major labor force status--employed, unemployed, not in the labor force--is based on responses to a few questions about the person's activities in the survey reference week. To the extent that these questions are misunderstood, the quality of the labor force classifications may be affected.

Palmisano (1989b) conducted a study of respondents' comprehension of alternative versions of the labor force status questions. The study indicated that shorter questions result in better comprehension.

C. Key Features of the Questionnaire

Two alternative questionnaires have been developed incorporating results from the research described above, the recommendations of the Levitan Commission (1979), and recommendations of the BLS-Census Questionnaire Redesign Task Force (BLS 1986). The two alternative questionnaires, referred to as Version B and Version C, are very similar in many respects. However, different wordings or wording sequences were used in several areas of the questionnaires.

During development of the alternative questionnaires, careful attention was given to the inclusion of direct questions in order to reduce reliance on volunteered responses (this was recommended by the 1962 Gordon Committee, and the 1986 Task Force). Efforts were also made to enable consistent application of classification criteria, incorporate the use of dependent interviewing, and implement the recommended definitional changes. Each of these are discussed in more detail below.

1. Use of Direct Questions/Less Reliance on Volunteered Responses

In an effort to reduce reliance on volunteered information and to clarify operational definitions for key labor force concepts, several questions have been added. Included are questions pertaining to the existence of a family business, retirees' desire for work, expectations of persons on layoff to return to their job, usual hours worked, and multiple jobholder status. These issues are addressed in turn below.

a. Identification of Business in Household

In the current CPS questionnaire, the question on work contains a parenthetical instruction which tells the interviewer to ask about unpaid work if

there is a farm or business operator in the household. As documented in Martin (1987), interviewers currently have no direct way of knowing whether there is a business operator in the household. The interviewer can learn of a family business only if a person is identified as self employed in the industry and occupation questions (which may be after data are collected for other household members).

In both versions of the alternative questionnaires, a direct question on the presence of a business has been added. This is a household question and will be asked prior to the labor force questions. With this question, it can be determined whether a business exists and, if so, the identity of the owner(s) of the business. For households that have a family business, direct questions are then asked about unpaid work in the family business for all eligible persons who were not reported as working.

This feature of the alternative questionnaires eliminates interviewer reliance on volunteered information and unstructured probes to determine if there is a business in the household and whether or not family members did any unpaid work. This question may also prompt respondents to report marginal work activities that they otherwise would not have thought of reporting.

b. Retired/Disabled

One of the more frequent comments made about the current questionnaire is the burden placed on retired persons who have no attachment to the labor force. If a person responds to the question on major activity last week by saying he/she is retired, interviewers are currently required to continue asking about work last week, absence from a job, looking for work, and, in the outgoing rotations, job history.

In an effort to reduce respondent burden and ask only necessary questions, a response category of "retired" has been added to labor force status questions. In both of the alternative questionnaires, once a person provides a response of retired, a question on the desire for a job will be asked. If no desire for a job is indicated, a question to determine when the person last worked is asked. If the person last worked more than a year ago, no other questions are asked. If the person last worked within the past 12 months, industry and occupation data are obtained. However, if it is stated that the person wants a job, then the regular series of questions is continued.

A similar revision was made to reduce the burden for persons reporting that they are disabled. Currently, if a person responds by saying he/she is disabled, the CPS interviewer manual instructs the interviewer to probe whether the disability "prevents the person from doing any kind of gainful work

during the next 6 months" without telling the interviewer how to probe. If the interviewer determines that the disability does prevent work for the next 6 months, then the interviewer is permitted to skip to a later part of the questionnaire that asks about the person's job history and whether or not they currently want a job. Otherwise, the interviewer must administer the entire questionnaire. The alternative questionnaires provide more structure for responses of "disabled" or "unable to work". Specific response categories have been added to the key labor force items. If one of these two responses is provided, then the next question asks whether the disability prevents the person from accepting any kind of work during the next 6 months. If not, the regular series of labor force questions is continued. If the person's disability does prevent them from accepting a job during the next 6 months, then only a question about when the person last worked is asked.

c. Job/Layoff

In the current questionnaire, persons not working in the survey reference week are asked, "Did you have a job or business from which you were temporarily absent or on layoff LAST WEEK?" This question is frequently misunderstood because it is long and awkwardly worded. Many interviewers have reported that respondents hear only part of the question. Some respondents think they are being asked if they have a business. Others hear "layoff" and respond only to that part of the question.

As a solution to these problems, the question has been split into two separate questions in the alternative questionnaires. Respondents will first be asked whether they were absent from a job. If not, the next question is "LAST WEEK, were you on layoff from a job?" (No distinction is made in the alternative questionnaires between temporary and indefinite layoff.)

To be considered "on layoff", a person has to expect to be recalled to his/her job. From the research summarized in Section III.B., it is known that respondents have broader definitions of the term "on layoff" (Rothgeb 1982a, Campanelli et al., 1989, Palmisano 1989a, U.S. Bureau of Labor Statistics 1988). Since the official definition is never provided to respondents, they use their own interpretation of the concept when answering the question. Earlier research indicated that only 68 percent of the persons reported to be on layoff actually expected to return to their jobs (Rothgeb, 1982a).

As a solution to the misinterpretation of the concept of "on layoff," specific questions regarding a person's expectations to return to their job have been added.

Another feature of the alternative questionnaires

is that there is a separate series of questions for persons on layoff. In the current questionnaire, all interviewers are required to reword questions on duration and full-time/part-time status to reflect the person's layoff status. All of the questions in the alternative questionnaires are specifically designed to reflect the person's layoff status.

d. Hours Worked

The current question on hours worked asks for the number of hours worked last week at all jobs. These data are important because they are used to determine the size of the full-time vs. part-time labor force. During the interviewer debriefings (U.S. Bureau of Labor Statistics 1988), it was reported that respondents do not always hear the last phrase "at all jobs," so some respondents that work at two jobs might only report hours for one job. Additionally, it is not known if people report their exact actual hours, their usual hours, or some approximation of actual hours.

It is often difficult for people to remember what their own work hours were the previous week. Since one household respondent provides information for all eligible persons in the household, a much more difficult task is being asked of the respondent--that is, to have knowledge of the hours worked by all other persons in the household, remember what they were, and report them accurately.

In order to obtain a better measure of actual hours, address the issue of work schedules more completely, and obtain separate data on hours worked at a MAIN job and other jobs, new series of questions for hours have been designed. The new series are different for Version B and Version C, with Version B having less detail. In both versions, all employed persons are asked if they worked at more than one job last week to identify multiple job holders and improve reporting of hours.

In Version B, a question is asked to determine if the usual hours worked are 35 or more per week. Then, a question on actual hours worked last week is asked. The question on actual hours is asked separately for the main job and other job(s) if the person is a multiple jobholder.

It is hoped that asking first about usual hours and then about actual hours will provide a clue to the respondent that two different pieces of information are being requested.

In Version C, the questions have been designed in such a way as to impose an anchor and adjustment recall estimation strategy on respondents. That is, first the person is asked about the number of hours usually worked at their main and other jobs. Then separate questions are asked to determine if a person worked any extra hours or took any time off. Then the number of actual hours

worked is requested.

The theory behind this approach is that the respondent will think about what they usually do, be reminded about any possible exceptions, and report their actual hours more accurately.

2. Incorporation of Dependent Interviewing (Industry/Occupation and Duration of Unemployment)

In CPS, over half of the data are collected through proxy interviews. Additionally, the household respondent frequently varies from one month to the next. It is sometimes difficult for a person to describe his/her job in such a way to allow accurate coding. It is even more difficult for a proxy respondent to have knowledge of someone else's job and accurately describe it. For these reasons, the industry and occupational data are not always consistent from month to month for the same person in the same job.

In order to make full use of an automated interviewing environment, dependent interviewing will be implemented in the alternative questionnaires during the second, third, and fourth months that a household is in sample. Dependent interviewing involves using information obtained during the previous month's interview in the current month's interview. It is especially useful for characteristics which tend not to change much over time. For the majority of the employed population, industry and occupation are two such variables.

Dependent interviewing is being used differently in the two alternative questionnaires. In Version B, respondents will be provided with the description of who they worked for the previous month and asked if they still work for that employer. If so, they will be provided with the previous month's description of their usual duties at that job and asked if that is an accurate description of their current job. If it is not, they will be asked the reason (e.g., job duties have changed, or description was not accurate or complete).

In Version C, once interviewers have verified that the person was working for the same employer as last month, the respondent will be asked if their usual activities and duties of the job changed significantly since last month. If the duties of the job have changed, the respondent will be asked to describe the current usual duties and activities. If the duties have not changed, no additional questions will be asked and the prior month's responses and occupational codes will be carried over.

3. Implementation of New Discouraged Worker Definition

In its final report, the National Commission on Employment and Unemployment Statistics recommended that the definition of discouraged

workers be revised to include new and more precise information on recency of prior job search and current availability for work.

In both versions of the questionnaire, questions on job search during the past 12 months, availability to start a job, and desire for full-time work have been added to the discouraged workers series of questions. The series will be asked in all rotations instead of the outgoing rotations as is done in the current CPS. From analysis of 1978 supplements to the CPS and the early 1980s Methods Development Survey, the estimated number of discouraged workers is expected to decrease by 50 percent once the revised definition is implemented (Hamel, 1979; Rothgeb 1982b).

IV. DESIGN OF CATI/RDD TEST OF PROPOSED QUESTIONNAIRE REVISIONS

The alternative versions of the CPS questionnaire are to be tested in a large-scale field test. This test, called the CATI/RDD (computer assisted telephone interviewing/random digit dialing) test, began in June 1990 and will continue through September 1991. The test plans, summarized below, were formulated by the CPS Questionnaire Development Work Group convened by the CPS Questionnaire Design Subcommittee.

A. Goals/Objectives

The goal of the CATI/RDD test is the development of the CPS questionnaire which is to be implemented in January 1994. Achievement of this goal requires evaluation of the alternative questionnaires to determine and/or develop questions that work well and are understood best. The evaluation will entail: (1) identification of differential questionnaire effects relative to potential response error; (2) identification of response error sources relative to the test questionnaires; and (3) comparison of labor force estimates across test and control questionnaires.

B. Methodology

The test will consist of two phases. In Phase I, two alternative questionnaires will be tested along with the current CPS questionnaire. Phase I is scheduled to run from June 1990 through January 1991.

Following Phase I, the two alternative questionnaires will be integrated into one version, based on results obtained in Phase I as well as supporting information from any other studies that may be conducted. The revised alternative questionnaire will be tested in Phase II along with the current CPS questionnaire. Phase II is scheduled to run from June through September 1991.

C. Sample Design

The sample for the CATI/RDD test has been selected using random digit dialing sampling techniques. Hence, the universe for the test comprises all housing units in the contiguous U.S. with a working telephone number. The sample each month will be a nationally representative sample of the universe.

Each month's sample consists of approximately 6,000 (4,000 in Phase II) households eligible for interview. Each questionnaire will have approximately 2,000 sample units assigned. Interviewing will take place the week before and the week following collection for the CPS (i.e., collection will be during the week containing the 12th and the 26th of each month). The sample will be balanced to provide equal representation across weeks and questionnaires (i.e., approximately 1,000 units/collection week/month).

Sample units selected for the CATI/RDD test are being rotated in much the same manner as are sample units in the CPS. Each sample unit will be eligible for interview for 4 consecutive months and then dropped from the sample. Sample units will be assigned to one collection week (either the 12th or the 26th) and one questionnaire for the entire 4-month rotation.

Units may be selected for post-interview questions during their fourth month in sample. One group of respondents are being asked a number of probing questions on their interpretation of the labor force questions and their response strategies. A second group will be presented a number of vignettes (hypothetical situations) and asked how they would answer the "at work" and "looking for work" questions for those vignettes.

Based on prior experience in telephone surveys with no initial personal visit interview conducted by the Census Bureau, a response rate of 75% - 85% is expected for the survey.

D. Analysis Plans for Test

The primary objective of the analysis of the CPS CATI/RDD data is to identify problem areas in question wording/sequences in Versions B and C in order to finalize development of a single alternative questionnaire.

Both quantitative and qualitative information are included in the analysis to identify problems and potential solutions in question wordings/sequences. Analysis is making use of item nonresponse measures, response distributions, respondent post-interview and interviewer debriefing data, interview monitoring data and time measures. Interviewer effects and consistency of reporting across time are also being examined. No single piece of the analysis will determine which question version is better, but instead will stem from the

combination of information from the various sources. The methods that are being used to obtain the data are described below.

1. Item Response Analysis

The item response analysis consists of two components, item nonresponse measures and response distribution measures. Chi square tests are being conducted to ascertain whether questionnaire versions differ significantly.

a. Item Nonresponse Analysis

For every item in each questionnaire, nonresponse rates are being calculated. This provides some indication of the effect of modifications on item nonresponse rates. From these data, it can be determined if different question wordings for comparable items produce different nonresponse rates. Separate rates for refusals and "don't knows" are being examined, as well as data on self/proxy status as it relates to item nonresponse.

b. Response Distribution Analysis

Response distributions are being analyzed for those items which differ between questionnaires. This includes items with different response categories and/or different question wording, as well as cases where one item in the control has been divided into two items in the alternative versions. In some cases, we have developed hypotheses, through laboratory work, about how response distributions may differ between versions. This analysis will indicate the degree to which different versions of a question produce different patterns of responses. Data gathered through other methods will also shed light on how to interpret differences in responses that are found.

2. Respondent Post-Interview

Respondent post-interviews for selected items are being conducted during fourth month-in-sample interviews to develop measures related to respondent comprehension and response formulation. From these data, we hope to obtain an indication of how respondents interpret and answer the questions being asked. There are two components of the respondent post-interview: probing questions and vignettes. A household receives only one type of post-interview, either the probing questions or the vignettes.

The first component, probing questions, mainly serves as an extension of the research laboratory by covering areas which have not been previously explored explicitly in the laboratory, such as persons employed part time for economic reasons, unpaid family workers, jobseekers, and discouraged workers. For a sample of cases, probing questions

are also being asked in reference to the main labor force questions to gain insight into respondents' basic understanding of labor force concepts, such as work, job, and business. These questions are critical to evaluating different versions of these questions, some of which have never been tested.

The series of probing questions a person is asked depends on the path taken during the interview. Probing questions are only asked of persons for whom the questions are applicable. For example, respondents who report actual hours worked, are asked how they arrived at their answer. Did they count up the number of hours they worked each day or did they figure it out some other way? Did they work any extra hours on job related tasks for which they weren't paid? Did they include those hours when they reported their actual hours worked?

Selection specifications have been developed so that a given household only receives part of the debriefing questions for which it is eligible. This prevents a household from being overburdened in the post-interview.

The second component of the post-interview consists of vignettes related to the concepts of "work" and "looking for work." Respondents are provided with a description of a hypothetical situation and asked how they would answer a particular question for a person in that situation. The vignettes will provide information on respondents' global understanding of concepts.

3. Interview Monitoring

Six researchers from the BLS and Census Bureau are conducting intense monitoring of the interviews each month. The primary purpose of monitoring is to observe and evaluate respondent behavior, as well as interviewer behavior, relating to the questionnaires. Areas of interest include the comprehension of questions, task difficulty, context effects, and flow of the questionnaire. A standardized monitoring form has been developed to provide a systematic method of identifying the respondent/interviewer behavior associated with each question. The behavior coding is based on the methodology developed by Cannell, et al (1989).

Approximately fifty cases are being monitored each month. A research design has been developed to insure that monitoring equally covers all interviewers, all shifts and all versions of the questionnaires.

4. Interviewer Debriefings

Between August 1990 and January 1991 all interviewers will be debriefed by BLS/Census researchers. Interviewers will complete a standardized debriefing questionnaire, as well as participate in a group discussion. Interviewers will be asked about items for which there are high

refusal rates, problems of comprehension or other task difficulty, context effects, and also about the flow of the questionnaires.

5. Estimates of Respondent Burden by Item Series

Timers have been built into the CATI instrument to provide estimates of the interview duration for selected series. The item series' duration data will allow comparisons of interview duration between questionnaires for the key series.

6. Interviewer Effects

One source of measurement error is interviewer bias. Measures of interviewer variability for each item within each questionnaire version are being estimated. Estimates of interviewer variance show the extent to which interviewer effects are present in different questions. We will only be able to identify items which are particularly problematic.

7. Consistency of Reporting

Indices of inconsistency for item responses and labor force classifications across time are being calculated, based upon data collected from sample households for the four months in sample. These indices will serve as pseudo-measures of response variability, in the absence of reinterview data.

V. QUESTIONNAIRE IMPLEMENTATION

Results from Phase I and Phase II of the CATI/RDD test will serve as input into the development of a final recommended CPS questionnaire. The final questionnaire will be decided on by January 1992. Following programming on CATI/CAPI, the final questionnaire will be used in the latter part of a CATI/CAPI test that will be conducted between October 1991 and June 1992. This will lead into a monthly overlap sample survey of 15,000 households per month that will begin in July 1992 and continue through December 1993. The overlap sample will be used to estimate the combined effect of the new questionnaire and the use of CATI/CAPI on the labor force estimates. Bearing any unforeseen problems, the revised CPS questionnaire will be introduced into the CPS sample in January 1994.

BIBLIOGRAPHY

Butz, William P., and Thomas J. Plewes, (1989). "A Current Population Survey for the 21st Century," in Proceedings of the Fifth Annual Research Conference, Washington, DC: U.S. Department of Commerce, Bureau of the Census, pp.3-13.

Campanelli, Pamela C., Jennifer M. Rothgeb, and Elizabeth A. Martin, (1989). The Role of Respondent Comprehension and Interviewer

Knowledge in CPS Labor Force Classification. Paper presented at the annual meeting of the American Statistical Association, Washington, D.C.

Cannell, Charles, Lois Oksenberg, Graham Kalton, Katherine Bischooping, and Floyd J. Fowler, (1989). New Techniques for Pretesting Survey Questions. Grant Number HS 05616 from the National Center for Health Services Research and Health Care Technology Assessment.

Fracasso, Maria P. (1989). Reliability and Validity of Response Categories for Open-Ended Questions in the Current Population Survey. Paper presented at the annual meeting of the American Statistical Association, Washington, DC.

Hamel, Harvey. "Two Fifths of Discouraged Workers Sought Work During Prior Six Month Period." Monthly Labor Review, March 1979, pp. 58-60.

Martin, Elizabeth. (1987). "Some Conceptual Problems in the Current Population Survey," in Proceedings of the Section on Survey Research Methods, Washington, DC: American Statistical Association, pp. 420-424.

National Commission on Employment and Unemployment Statistics. (1979). Counting the Labor Force, Washington, DC: Government Printing Office.

Palmisano, Mark (1989a). Some Results on the Application of Laboratory Research Techniques to Survey Methodology. Paper presented at the meeting of the American Association for the Advancement of Sciences.

Palmisano, Mark (1989b). Respondent Understanding of Key Labor Force Concepts used in the CPS. Paper presented at the annual meeting of the American Statistical Association, Washington, D.C.

President's Committee to Appraise Employment and Unemployment Statistics. (1962). Measuring Employment and Unemployment. Washington, DC: Government Printing Office.

Rothgeb, Jennifer M. (1982a). Summary Report of July Follow-up of the Unemployed. Unpublished Census Bureau memorandum.

Rothgeb, Jennifer M. (1982b). Summary Report - MDS Phase II. Unpublished Census Bureau memorandum.

U.S. Bureau of Labor Statistics. (1986). Report of the BLS-Census Bureau Questionnaire Design Task Force. Unpublished report.

U.S. Bureau of Labor Statistics. (1988). Response Errors on Labor Force Questions Based on Consultations with Current Population Survey Interviewers in the United States. Paper prepared for the OECD Working Party on Employment and Unemployment Statistics.