The Current Population Survey: a historical perspective and BLS' role

BLS assumed major responsibility for the CPS in 1959 and since then there have been increases in sample size, changes in and additions of questions, and refinements in the household survey's concept, but, in general, the basic concepts have remained the same since the survey's beginnings in 1940



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The Current Population Survey is probably the oldest continuous monthly sample survey of households in the world. Its roots go back to March 1940, when the Works Progress Administration, an independent agency established during the Great Depression of the 1930's, initiated a small, household survey that would measure the level and change in the size of the labor force, employment, and unemployment. In the ensuing period, the survey has grown to its present size of 60,000 households, and more information is now collected. But the 44 years have seen few changes in the basic concepts used to measure employment and unemployment, and a remarkably comparable set of historical data is available for public use. This article describes the history of the Current Population Survey, with particular emphasis on its development in the past quarter century, over which time the Bureau of Labor Statistics has had primary responsibility for the survey.

The 1940-59 period

During the Great Depression it became obvious to policymakers that accurate statistical information on unemployment and related problems was unavailable. Estimates of employment existed through the survey of nonagricultural

establishments that had been conducted by BLs since 1915, and counts of "gainful workers" were obtained in the decennial censuses. But throughout the worst years of the depression, no one knew how many unemployed persons there were, much less their characteristics. (Later, it was estimated that the jobless rate had been as high as 25 percent. 1) The problem of obtaining more accurate estimates of unemployment was first addressed with the 1937 Census of Unemployment, a postcard survey covering the entire country.2 This survey presented numerous problems, because no statistical controls were possible, such as for nonresponse, but it whetted appetites for more data, leading to the first sample survey of the population in December 1939.³ The first 3 months of the survey were a testing period, and March 1940 is generally credited as the beginning date of what was then called the "Monthly Report of Unemployment." This date coincided with the 1940 census of population, which also, for the first time, asked questions on the labor force, employment, and unemployment based on a new activity concept.

The activity concept refers to a person's labor market status being determined by what he or she was doing during a specified time (which has come to be a specific week). Prior to the 1937 postcard census, the labor force concept used was the "gainful-worker" measure. This referred to persons who were reporting themselves as having an occupation from which they had earned money or a money

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equivalent, or in which they had assisted in the production of goods, regardless of whether they had worked or looked for work at the time of the census.⁴ Consideration of these responses was useful when interest was focused on broad measures of potential labor supply and available skills. However, it was not particularly useful as a measure of current labor force utilization, because it included not only currently employed persons but also some people who were either unemployed or not in the labor force. The activity concept solved this problem, and, beginning with the postcard census and continuing in the Works Progress Administration-initiated survey, it was established that the population could be divided into employed, unemployed, or not in the labor force. Only the amount and type of detail collected and the degree of sophistication of the questions have changed since then, although there have been many changes in the survey and sample design. The conceptual framework has been revised only around the edges: There has been no change in the notions that employment means that one is working (more precisely, has a job), that unemployment requires that a job is being sought, and that absence of either activity means a person is not in the labor force.

The Works Progress Administration retained responsibility for the survey throughout 1940 and 1941, but as the agency began to be phased out of existence it became clear that the survey needed a permanent home. The Bureau of Labor Statistics, Census Bureau, and Social Security Administration were all candidates, and in August 1942 the Bureau of the Budget (now the Office of Management and Budget) selected the Census Bureau. ⁵ By October 1943, the Bureau of Census had thoroughly revised the sample, converted it to a full probability basis, and expanded the number of primary sampling units. Within 2 years, the sample size was increased from about 8,000 to 23,000 housing units. ⁶ The name was changed as well, to the "Monthly Report on the Labor Force," and still later (1948) it became known as the Current Population Survey (CPS).

The Census Bureau continued to introduce improvements into the survey over the next 15 years, including further sample expansions, sampling refinements, and the notion of collecting special information once a year on an *ad hoc* basis through supplements. Among the changes were the use of the decennial censuses as the basis for revising the sampling frame and population controls and the introduction of the 4–8–4 rotation system for sample households (that is, a household is in the sample for 4 months, out for 8, and returns for 4 more months). By 1959, there were some 35,000 households covered monthly in 330 areas throughout the Nation.

1959—BLS takes over

In a memorandum dated November 19, 1958, issued by the Bureau of the Budget, then Secretaries Lewis Strauss of the Department of Commerce and James Mitchell of the Department of Labor agreed to a BLS-Census Bureau swap of responsibilities. The BLS gave up its role in construction statistics, associated with contracts awarded, building permits, housing starts, and construction activity series; the Census Bureau gave up the responsibility for the content, analysis, and publication of the "Monthly Report on the Labor Force." The memorandum indicated that "the BLS will purchase from the Census Bureau the collection and tabulation services," assume "the budget responsibility for the employment and unemployment statistics portion," and that the Census Bureau would retain responsibility for conducting specific CPS supplements and issuing those reports. The effective date of this transfer of duties was July 1, 1959.

Up to the time of the transfer, the employment and unemployment statistics were issued under Current Population Reports series P-57, entitled "The Monthly Report on the Labor Force." Typically 16 pages, this report combined analysis and tabular material and was sold by the Census Bureau for 15 cents a copy. Summary statistics in advance of this report were issued jointly by the Departments of Commerce and Labor in a "Combined Employment and Unemployment Release" and included material not only from the CPS but also data on nonagricultural payroll employment (from BLS) and State insured unemployment (from the then Bureau of Employment Security). After the transfer, BLS continued the tradition of a combined release of data from these three programs with its own "Monthly Report on the Labor Force" and also began to include the household survey statistics in its monthly magazine Employment and Earnings. Indeed, it was undoubtedly the desire to centralize the control and analysis of data from separate sources—but particularly the household and establishment surveys⁸—that led to the transfer of functions.

As time passed, a number of changes occurred in the publication format and amount of detail derived from the CPS. For example, because CPS data were generally available earlier than the establishment data, they were issued in summary detail in a news release entitled "Summary Employment and Unemployment Figures." About a week later, the "Monthly Report on the Labor Force" was published, covered by another news release, "The Employment Situation." This second news release averaged about four pages, with summary text and one table of highlights, while the "Monthly Report on the Labor Force" grew to some 20 pages that included text, charts, data from both surveys, and explanatory material.

In 1966, improvements in the processing of the establishment survey made it possible to release the two sets of data together, and "The Employment Situation" became the vehicle for this issuance. At the same time, the "Monthly Report on the Labor Force" was discontinued as a separate publication but was retained as part of *Employment and Earnings*, which was retitled *Employment and Earnings and Monthly Report on the Labor Force*. (In 1969, "Monthly Report on the Labor Force" was dropped from the title.)

Along with the changes in the mode of issuance of these reports and releases came improvements in the detail presented. One important advance was in the area of seasonal adjustment of data series. In the 1950's, the overall unemployment rate had been the only statistic that was adjusted for seasonality. Therefore, all analysis was based on unadjusted data. Analyses in those days contained frequent references to weather conditions and also to labor force and other changes that typically occurred at the given time of year and whether a particular monthly movement was more or less than usual. The advent of computers gave rise to the possibility of extensive seasonal adjustment, which eliminated much of this problem and clarified analytical interpretations. It also facilitated a better understanding of cyclical movements, as economic comparisons could be made more easily between pairs of months for periods other than 1-year intervals.

Changes since the takeover

Growth in sample size. Since the transfer of functions between BLS and the Census, the number of surveyed households has been expanded on four occasions and reduced twice. The count remained at 35,000 occupied households from 1956 through the end of 1966. Then, households that had been used in a separate panel survey for testing questionnaire changes during 1964-66 were added to increase the count to 50,000.9 An important reason for increasing the sample size was to improve the reliability of data on detailed worker groups, such as that pertaining to race, sex, and age. The size was subsequently reduced slightly to 47,000 in the early 1970's, as a result of a redesign of the sample following the 1970 census of population. However, certain sampling refinements resulted in increased data reliability; for example, area coverage was increased from 333 to 449 primary sampling units. 10

Later in the 1970's, demands for State and area data increased markedly, commensurate with expanded uses of subnational labor force data. A variety of legislative mandates, including the Comprehensive Employment and Training Act, required unemployment data for States and areas as a basis for distributing billions of dollars in revenuesharing monies. The Current Population Survey as constituted at that time was essentially a national sample designed to produce national data. Prior to 1976, subnational data deemed sufficiently reliable to warrant publication, even on an annual average basis, covered only 10 States.

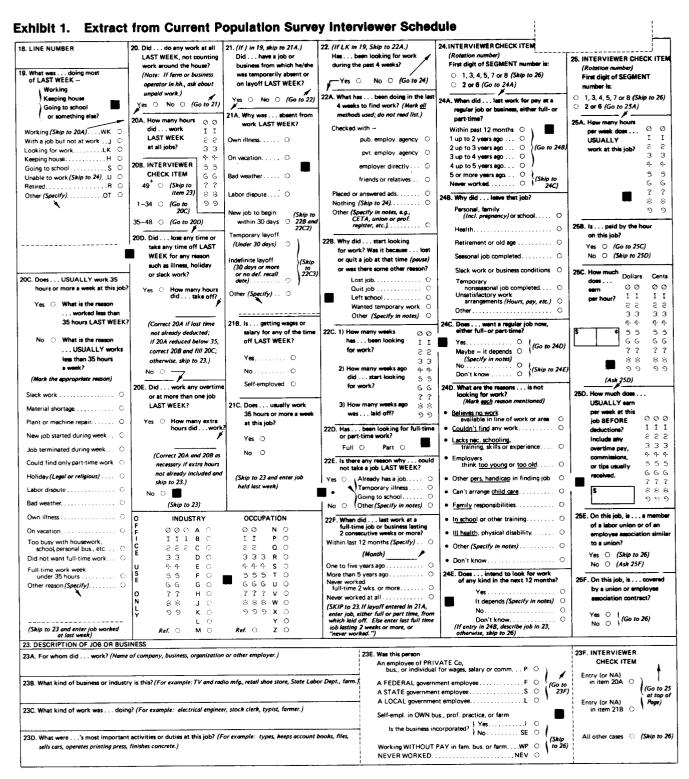
BLS solved this problem by expanding the number of sample households for the less-populated States; this was done in stages. In 1976, 9,000 additional households were sampled, with all of the expansion in 23 smaller States. Another 9,000 households were added to the survey in 1980, this time in 40 States. Initially, these 18,000 households were used to boost data reliability for State and sub-State estimation but subsequently were added to the national sample, also in stages. The national sample size thus became

56,000 occupied households in 1978 and 65,000 in 1980. There was a final sample increase of 6,000 households in 1981, designed to improve the reliability of data for 30 specific metropolitan areas, 10 of their central cities, and the balance of State estimates for those States containing these areas. (This last increase was never used for national estimates.)

In 1982, with the advent of Federal budget stringencies, it became necessary to cut back on some of these added households. After a careful review of the needs for State and local labor force estimates, BLs at that time decided that the final 6,000 addition plus half of the 1980 addition would have to be rescinded. Thus, a total of 11,000 surveyed households was eliminated, and the monthly sample size became the current figure of 60,000 occupied households, representing 629 areas in 1,148 counties and independent cities. Because the expansions had not materially improved the reliability of national estimates—in that they concentrated on the less-populated States—this reduction in households did not reduce national data reliability.

Conceptual and other changes. As indicated earlier, the advent of monthly household survey enumeration in the labor force field brought with it the notion of activity as a basis for categorizing the population into discrete employment status groupings. This conceptual basis has been sustained throughout the ensuing 44 years. There have been changes in the wording of some of the questions to improve understanding on the part of survey respondents and thus produce better results, refinements in the concept, and the addition of questions to elicit more information about the population, but the basic concepts have remained the same.

Over time, the statistics that have generated the greatest interest have been the level and rate of unemployment. Unemployment is basically defined as being without a job. looking for one, and being currently available for work. Exhibit 1, the questionnaire currently used in the survey, shows how the unemployed are identified through questions 22 (yes), 22A, and 22E. Persons on layoff and those waiting to start a job within 30 days need not have looked for work to be counted as unemployed; they are identified in questions 21 and 21A. Contrast this with the primary question (corresponding to question 22) asked in 1945: "Was . . . looking for work last week?" Layoffs were not identified until 1947. Prior to 1945, interviewers did not even ask specific questions directly to respondents but were instructed to determine if, for example, they had jobs or were seeking them. By 1947, the "last week" was dropped—it had been specified for all previous questions associated with jobholding and the question became: "Was . . . looking for work?" In the early years, persons on a temporary layoff (less than 30 days) and those awaiting the start of a new job (also within 30 days) were included among the employed. But, following recommendations by a 1955 study commission, 11 both groups were shifted into the unemployed category be-



ginning in 1957. (Historical data were revised back to 1947.)

Many changes in the questionnaire occurred in 1967, resulting from recommendations made by the President's Committee to Appraise Employment and Unemployment Statistics (often called the Gordon Committee after its chair, Professor Robert A. Gordon) in its 1962 report, Measuring Employment and Unemployment. ¹² Changes affecting un-

employment counts included moving to a 4-week search period from the implied 1 week, the requirement of at least one specific search method (to avoid "state of mind" situations), and the addition of an "availability test" to insure that jobless individuals were searching for a current job as opposed to one in the future. At the same time, the minimum age for labor force eligibility was raised from 14 to 16 years

(not a Commission recommendation) in order to conform to age requirements regarding school attendance and work eligibility. In addition, those persons who *volunteered* that they would have looked for work except for the belief that there were no jobs available in their line of work or in the community were no longer counted as unemployed; this change was made in keeping with the specific search method requirement. Also, persons who had a job but were "with a job but not at work" (such as on strike or vacation) and *volunteered* that they had looked for another job during their absence from their current job were switched from the unemployed to the employed count. Neither of these last two changes was thought to have greatly affected survey results. 13

Note the emphasis on the word *volunteered*. One of the Gordon Committee's tenets was that 'reliance on subjective attitudes and volunteered information should be minimized.'' The changes that it recommended and that were instituted following a period of extensive testing by the BLS and Census Bureau during 1964–66 clarified several hitherto gray areas in the measurement of unemployment. Specifically, to be counted as unemployed, a person had to be: (1) without a job, (2) be available for one "now" (excluding temporary illness), and (3) indicate one or more search methods used sometime in the prior 4 weeks. Thus, the use of activity as a basis for labor force classification was strengthened.

While the Gordon Committee suggested the elimination of volunteered discouragement from the unemployed count, it also recommended that more information be obtained on the entire group of persons not in the labor force. The result was the series of questions now numbered 24. (See exhibit 1.) Labor force discouragement is identified primarily through questions 24C and 24D. Data on this important group have been collected regularly since 1967 and published on a quarterly basis. More recently, another presidential study group—the National Commission on Employment and Unemployment Statistics, chaired by Professor Sar Levitan examined closely the measurement of labor market discouragement, among a number of other issues. Though ultimately concurring that discouraged workers should not be included among the unemployed, the Commission did recommend that several changes be made in their definition, foremost of which was a requirement of some previous job search, which it specified to be within the prior 6 months (but not, of course, within the last 4 weeks). 15 This recommendation was accepted by Secretaries of Labor Ray Marshall and Raymond J. Donovan, 16 but, owing to the lack of funding to carry out adequate testing, it has not as yet been introduced into the survey.

Data and analytical advances

As indicated, one of the reasons that the responsibility for the Current Population Survey was transferred to the BLS was to integrate the analytical functions. The Bureau

already had a well-respected journal, the Monthly Labor Review, which has served as the vehicle for much of the analysis of CPS data. Numerous articles by BLS staff covering various aspects of labor force behavior and trends have appeared in the Review; for example, a review of employment and unemployment developments is published annually. 17 The range of topics drawing on CPS data has been extraordinarily diverse, reflecting the diversity of the survey itself. Thus, there have been articles on the employment situation of specific worker groups, for example, youth, the elderly, women, blacks, and Hispanics; on trends for specific economic sectors: agriculture, self-employment, and various occupational or industrial groups; and on worker characteristics such as educational attainment, job tenure, or moonlighting. The focus may be a snapshot of conditions at a specific time, a study of secular trends, or an analysis of cyclical developments. Techniques of analysis range from relatively simple, cross-sectional comparisons to more complex quantitative procedures. Many of the articles, and particularly those based on CPS supplements, also have been reprinted as Special Labor Force Reports. Beginning with the first one issued in 1960 on the subject of educational attainment of workers, 18 there have been 252 of these reports published (as of February 1984). In most cases, these reprinted reports contain special tabular material that does not appear in the articles.

Responsibility for CPS supplements has been shared by the BLS and the Census Bureau over the years. Indeed, the CPS has also been available for other agencies to purchase space for special inquiries, and the Departments of Agriculture and Health and Human Services have been frequent users of the survey, taking advantage of the fact that, although it is primarily designed for the collection of employment and unemployment statistics, it is also a general population survey. At present, the Census Bureau uses the survey to obtain data on annual income of persons and families; educational attainment, fertility, birth expectations, and migration of the population; and school enrollment of youth. The Bureau of Labor Statistics obtains data annually on the work experience of the population (in conjunction with the income supplement), the status of schoolage youth and recent school graduates and dropouts, educational attainment of workers, and the marital and family status of workers. Through 1981, BLs also obtained annual supplemental information on multiple jobholders, work schedules, and absences from work. On a less frequent, sometimes even ad hoc basis, data have been obtained from BLS-sponsored supplements on job and occupational tenure, occupational mobility, work history and job search of the unemployed, and how workers got their jobs. Most recently, a special supplement was conducted in January 1984 on displaced workers.

Much effort has gone into expanding the amount of statistical detail published—and also the amount available for special analyses or for users—principally in "The Employment Situation" news releases and in Employment and Earnings. In addition to this expansion of monthly detail, new data series have been added on a quarterly basis, covering such features as family status of workers, weekly earnings of individuals and families, Hispanics, veterans, metropolitan areas, poverty areas, and persons not in the labor force (including discouraged workers). For the convenience of users, BLS has provided additional published reports on a quarterly basis-for women, minorities, and workers' earnings. Chartbooks have also been issued on an occasional basis. 19 A major achievement has been the issuance of a two-volume historical databook.20 In order to clarify the survey, the data, and the concepts, BLS has prepared a number of special technical reports, including How the Government Measures Unemployment, 21 which has been updated and reissued on several occasions.

The data on weekly wage and salary earnings referred to earlier (see questions 25A-25D in exhibit 1) became a part of the monthly survey questionnaire in 1979, after having been previously collected through a CPS supplement. More recently, BLs has added survey questions eliciting information on the union affiliation of employed persons (25E and 25F); publication of these data has not yet been initiated but will probably begin within a year. Another addition to the monthly questionnaire, not shown in the exhibit, asks persons who are 16 to 24 years old whether they are currently enrolled in school and, if so, whether they attend college or high school on a full- or part-time basis. This resulted from a recommendation by the National Commission on Employment and Unemployment Statistics,²² and, as with the union membership information, these data have not as yet been published. In both cases, however, BLS will begin publishing the data on a continuing basis as soon as the survey results have been carefully reviewed for accuracy and consistency.

The future of CPS

Between April 1984 and July 1985, an entirely new sample is being phased in, based on information and materials from the 1980 census of population. Redesigns are routine, in the sense that this process has occurred following every decennial census since the survey's inception. However, the current redesign is not routine but, rather, has involved an extensive reexamination of the entire survey process. Perhaps the biggest change is that, heretofore, the CPS has had a national sample design. But as previously discussed, the demands for subnational data that arose in the 1970's needed to be accommodated. In the sampling design now being introduced, the national sample will be the combination of 51 individual samples—each State plus the District of Columbia.

Further changes in the questionnaire are being contemplated, but implementation, if feasible, would first require testing and evaluation. Past experience, particularly with the introduction of the new questionnaire in 1967, has made

it clear that survey revisions cannot be made without extensive testing in a survey panel that is separate and distinct from the CPS. We have learned, for example, that changes in wording or in seemingly irrelevant areas can affect the important measures of employment and unemployment. Thus, the plan to revise the definition of discouragement cannot be put into place until after full testing.

In addition to the discouragement measurement change, consideration is being given to two comparatively minor changes that can be expected to affect the composition of unemployment. One of the ways the unemployed are classified is by their "reason for unemployment"—that is, whether they lost their last job, left it, or entered the labor force. Within the job-loser category are persons on layoff (who expect recall to their former job) and persons who have permanently lost their job (other job losers). As was discussed by Robert W. Bednarzik in "Layoff and permanent job losses: workers' traits and cyclical patterns," there is a strong suspicion that the extent of unemployment stemming from worker layoffs is overstated.²³ Through a test conducted by the BLS and the Census Bureau in 1982, it was learned that while the term "on layoff," as used in questions 21 and 21A, is intended to refer to a job from which a person has been suspended with the expectation of recall, the nonstatistical community—including some survey respondents-interpret the word more broadly to mean that a job was lost, whether or not recall was anticipated.²⁴ The concept of layoff that is meant to be measured with question 21 must be specified more precisely for the respondent, so that persons reporting themselves on layoff will fit the definition intended in the survey. A rewording of the question would move some unemployed from the layoff to the other job-losers category, in which persons are searching for work, but only adequate testing could determine the extent of the change. Moreover, a few of those currently classified as being on layoff may not have sought work in the prior 4 weeks and, if so, would properly be classified as not in the labor force.

The second possible candidate for change in the unemployment area concerns "persons expecting to start a new job within 30 days." As described earlier, this category was included among the employed prior to 1957 and then shifted into the unemployed beginning that year. Current thinking is that the concept need not exist at all. Once again, reporting depends upon volunteered responses, violating an important Gordon Committee dictum. If there were a specific question—as the Canadian government discovered when it added one to its own labor force survey²⁵—there would be a much larger group than the 100,000 or so count we obtain on average. But most persons in this situation realize that they do not possess a job until they are in it. Preliminary research indicates that the bulk of the persons in this category report recent job search, in any case. Thus, eliminating the concept will also eliminate yet another volunteered response group in the survey as well as a jobseeking exception but probably

not affect the counts in any way. Because separate test panels can be quite expensive as well as difficult to institute, considerably more time will be necessary before implementation of this or the other two changes can be accomplished, if they can be carried out at all.

ALL OF THESE EFFORTS—the ongoing collection and analysis, data expansion, survey redesign, questionnaire testing, special supplement planning, and so forth—would not be possible without full cooperation between the Bureau of Labor Statistics and the Census Bureau. This has been the case on a continuing basis from the first day that BLS entered

the picture 25 years ago as the survey's prime sponsor. A steering committee composed of BLs and Census representatives meets monthly to resolve problems and monitor progress. Working groups on specific issues come into existence as the need arises. But the key to its successful operation has been the almost daily contact between members of both Bureaus' staffs. All recognize that the survey is important, and both agencies have historically geared their efforts to its continued accuracy and improvement. It is because of this joint commitment that the Current Population Survey has been sustained as a vitally important statistical vehicle for measuring the economic health of our Nation and its people.

FOOTNOTES—

¹See Stanley Lebergott, ''Labor Force, Employment, and Unemployment, 1929–39: Estimating Methods,'' *Monthly Labor Review*, July 1948. The Lebergott estimates were adopted as ''official'' and are published as such in BLS and Census Bureau publications. Lebergott subsequently made estimates of unemployment back to 1900 in *Manpower and Economic Growth* (New York, McGraw Hill Book Co., 1964).

²See Gertrude Bancroft, *The American Labor Force* (New York, John Wiley and Sons, Inc., 1958), p. 183. The census was conducted on Nov. 16, 1937, by the Bureau of the Census, with the cooperation of the Post Office Department.

³See Lester R. Frankel and J. Stevens Stock, "On the Sample Survey of Unemployment," *Journal of the American Statistical Association*, March 1942, pp. 77–80.

⁴See Gertrude Bancroft, *The American Labor Force*, p. 156. Also see John D. Durand, *The Labor Force in the United States*, 1890–1960 (New York, Social Science Research Council, 1948), pp. 12–13.

⁵See A. Ross Eckler, *The Bureau of the Census* (New York, Praeger Publishers, 1972), pp. 70–71.

⁶See Department of Commerce, Bureau of the Census, *The Current Population Survey: Design and Methodology*, Technical Paper 40 (Washington, U.S. Government Printing Office, 1977), p. 2.

⁷Executive Office of the President, Bureau of the Budget, Memorandum for Secretary Strauss and Secretary Mitchell, subject: "Construction and Labor Force Statistics," Nov. 19, 1958.

⁸The insured unemployment statistics are no longer published in *Employment and Earnings*, having been replaced by State and area estimates of labor force and unemployment.

⁹See Robert L. Stein, "New Definitions for Employment and Unemployment," *Employment and Earnings and Monthly Report on the Labor Force*, February 1967, pp. 3–27.

¹⁰The Current Population Survey: Design and Methodology, p. 4.

¹¹See "Interim Report of the Review of Concepts Subcommittee to the Committee on Labor Supply, Employment and Unemployment Statistics, Joint Economic Committee, 84th Cong., 1st sess., Nov. 7 and 8, 1955, p. 7.

¹² President's Committee to Appraise Employment and Unemployment Statistics, *Measuring Employment and Unemployment* (Washington, U.S. Government Printing Office, 1962). ¹³ An indication of the impact of these changes appears in Robert L. Stein. "New Definitions for Employment and Unemployment."

¹⁴Measuring Employment and Unemployment, p. 15.

¹⁵ National Commission on Employment and Unemployment Statistics, *Counting the Labor Force* (Washington, U.S. Government Printing Office, Labor Day 1979), pp. 44–49, 56. For a summary of the Commission's recommendations, see Robert L. Stein, "National Commission recommends changes in labor force statistics," *Monthly Labor Review*, April 1980, pp. 11–21.

¹⁶ See Interim Report of the Secretary of Labor on the Recommendations of the National Commission on Employment and Unemployment Statistics, transmitted to the Congress on Mar. 3, 1980, and Final Report of the Secretary of Labor on the Recommendations of the National Commission on Employment and Unemployment Statistics, transmitted to the Congress on Oct. 26, 1981.

¹⁷ See, for example, Eugene H. Becker and Norman Bowers, "Employment and unemployment improvements widespread in 1983," *Monthly Labor Review*, February 1984.

¹⁸ Arnold Katz, "Educational Attainment of Workers, 1959," Special Labor Force Report No. 1 (reprinted from the February 1960 issue of the *Monthly Labor Review*).

¹⁹Two examples are *Women at Work: A Chartbook*, Bulletin 2168 (Washington, Bureau of Labor Statistics, April 1983) and *Workers Without Jobs: A Chartbook on Unemployment*, Bulletin 2174 (Washington, Bureau of Labor Statistics, July 1983).

²⁰Labor Force Statistics Derived From the Current Population Survey: A Databook, Bulletin 2096, September 1982.

²⁴ How the Government Measures Unemployment, Report 505 (Washington, Bureau of Labor Statistics, 1977).

²²Counting the Labor Force, pp. 89-90.

²³Robert W. Bednarzik, "Layoffs and permanent job losses: workers' traits and cyclical patterns," *Monthly Labor Review*, September 1983, p. 11.

²⁴Robert W. Bednarzik, "Layoffs and permanent job losses."

²⁵ See "New Job to Start at a Future Date," *The Labour Force* (Statistics Canada, Cat. No. 71-001, March 1977).