

Revisions in Occupational Classifications for 1971

*By John E. Bregger

Following several years of extensive research in which the entire classification system of census occupations was reviewed extensively throughout the Federal establishment, substantial changes were made in the classification of occupations for the 1970 Census of Population. As a result, occupational data from the Current Population Survey (CPS), which utilizes the census classification system, will not be strictly comparable with preceding years' data beginning in January 1971.

Prior to every decennial census since 1840, the Census of Population Classification System must be reviewed in order to take account of such factors as the introduction of new jobs, changes in the work content of occupations, and changes in occupational terminology. In the past, such reviews have resulted in a number of changes in occupational titles, redefinitions and restructuring of the basic system, and in the addition of many new individual occupations to be separately identified in the census. Perhaps the most significant change in the classification system occurred in 1940, when it was totally transformed from an industry-oriented classification to the present "type-of-work-performed" system.

The 1970 reclassification was the most comprehensive since the 1940 overhauling and involved a large number of revisions. These revisions were primarily in recognition of the need to reduce the size of large categories; to be more specific with respect to general categories, especially the "not elsewhere classified" groups; and to identify new and significant occupations.

This introduction of the 1970 occupations into the CPS coding procedures, taking place effective with data for January 1971, is the first of a number of changes in the survey that will be made over the 1971-73 period as a result of the 1970 census. The CPS, of course, is directly tied to the Census of Population in a number of important respects that go beyond the classification of occupations. First of all, the population totals from the census

are independently updated each month in order to provide controls for the CPS estimates. Second, the conceptual framework with respect to labor force statistics of the two is identical. Third, the geographic and housing detail from the census is used in the sample selection process in the CPS. And finally, the census codes for classifying occupations and industries also are utilized in the CPS.

The nature of the changes

The number of specific occupations to be identified in the census was increased from 297 to 441, and the number of major occupation groups was increased from 11 to 12. In some cases there is identity between occupations; some new occupations result from simple splitting into parts of a 1960 category; in other instances new categories are formed from portions of several 1960 categories. Moreover, many job titles were shifted about in order to produce more homogenous occupations.

Some shifts of jobs between major groups became necessary. Most of these shifts were in terms of job titles; e.g., "jailers" was moved from "officials and administrators, n.e.c." to "guards and watchmen" under service workers.

The table accompanying this account provides a comparison of employment and unemployment by occupational categories based on 1960 and 1970 census occupation systems. The data are for the month of March 1970 and result from a special coding operation performed by the Census Bureau expressly for the purpose of providing a direct comparison of CPS occupational data on both the 1960 and 1970 systems prior to the introduction of the 1970 system. The 1960 data will differ from the figures previously published, however, since they do not

* Mr. Bregger is a labor economist in the Division of Employment and Unemployment Analysis and the Associate Editor of Employment and Earnings.

Employment and unemployment by detailed occupation, March 1970
(In thousands)

Occupation	1970 Census system		1960 Census system ^{1/}		Difference	
	Employed	Unemployed	Employed	Unemployed	Employed	Unemployed
Total.....	77,916	3,456	77,915	3,456	1	--
White-collar workers						
Professional, technical, and kindred workers.....	11,104	219	11,271	211	-167	8
Engineers.....	1,211	39	1,181	36	30	3
Medical workers--salaried.....	1,336	14	1,348	18	-12	-4
Medical workers--self-employed..	363	3	360	3	3	--
Teachers, except college.....	2,902	23	2,707	25	195	-2
Other professional workers--salaried.....	4,864	136	5,142	125	+278	11
Other professional workers--self-employed.....	428	3	534	3	-106	--
Managers and administrators, except farm.....						
Salaried.....	8,452	96	8,325	100	127	-4
Self-employed--retail trade.....	6,232	71	6,067	75	165	-4
Self-employed--other.....	1,080	14	1,082	14	-2	--
Sales workers.....	1,140	11	1,176	11	-36	--
Retail sales workers.....	4,722	189	4,744	197	-22	-8
Other sales workers.....	2,747	162	2,899	173	-152	-11
Clerical and kindred workers.....	1,974	27	1,845	24	129	3
Stenographers and secretaries...	13,455	495	13,674	507	-219	-12
Other clerical and kindred workers.....	3,447	110	3,428	109	19	1
Blue-collar workers						
Craftsmen and kindred workers....	10,008	385	10,245	398	-237	-13
Carpenters.....	9,966	430	10,012	425	-46	5
Other construction craftsmen....	811	108	803	104	8	4
Foremen, n.e.c.....	1,895	157	1,880	155	15	2
Machinists.....	1,426	31	1,458	35	-32	-4
Automobile mechanics.....	653	11	612	11	41	--
Other mechanics.....	813	17	835	17	-22	--
Metal craftsmen.....	1,549	32	1,935	47	-386	-15
Other craftsmen.....	674	25	629	19	45	6
Operatives and kindred workers....	2,145	50	1,860	37	285	13
Drivers.....	13,298	967	13,951	1,026	-653	-59
Mine workers.....	2,408	123	2,448	134	-40	-11
Automobile equipment operatives..	137	5	164	9	-27	-4
Other durable goods operatives..	507	46	495	42	12	4
Nondurable goods operatives....	4,529	342	4,375	322	154	20
Non-manufacturing industries....	3,647	317	3,787	330	-140	-13
Laborers, except farm.....	2,071	133	2,682	189	-611	-56
Construction laborers.....	3,798	435	3,379	387	419	48
Manufacturing laborers.....	686	134	691	131	-5	3
Other laborers.....	1,140	108	982	89	158	19
Service workers						
Service workers, excluding private household workers.....	1,972	193	1,705	166	267	27
Protective service workers.....	8,618	471	8,051	450	567	21
Waiters.....	944	23	928	25	16	-2
Other service workers.....	2,122	159	2,208	163	-86	-4
Private household workers.....	5,552	289	4,915	263	637	26
Farm workers						
Farmers and farm managers.....	1,640	64	1,647	66	-7	-2
Farm laborers and farm foremen....	1,729	6	1,733	4	-4	2
Paid.....	1,135	85	1,129	83	6	2
Unpaid.....	768	81	761	79	7	2
	367	4	368	4	-1	--

^{1/} These data differ from statistics already published for March 1970, because the composite estimating procedures were not used in order to permit a direct comparison with the 1970 Census code estimates.

reflect the effect of the composite estimating procedure used in the CPS.

The largest change for a major group was a net reduction of 653,000 in operatives. These operatives were moved primarily to service workers, craftsmen, and laborers, except farm. The major group with the second largest change was service workers, except private household, which had a net increase of 567,000. As mentioned above, part of this came from operatives, but other portions came from the professional and clerical groups.

Many of the small and specific changes that took place are not reflected in the table because monthly CPS data are not tabulated in the necessary level of detail; for example, although the professional and technical group showed a net decline (167,000), individual categories within the group actually showed an increase; some of the former professional and technical occupations were shifted into services. In addition, shifts frequently occurred among groups within the professional category. The data presented permit an assessment of the extent of the break or change in series for the largest groups taking place with data for January 1971. Any comparison with prior years' data should be made with caution and with recognition of these changes.

In general, most of the differences between data based on the 1960 and 1970 systems are very small. Small differences, of course, are usually not statistically significant. As a rule, a change should exceed the sampling error in order to be deemed significant. (See table C in "Labor Force Data" section in the Technical Note for an indication of the relevant standard error.) Some of the differences could actually result from small errors in the estimating, coding, and processing procedures; for example, the overall employment totals differ by 1,000. As is evident from the table, differences in unemployment levels are quite small and generally negligible.

Not reflected in the table is one of the biggest reclassification changes, created by the splitting of the operatives category into two separate major groups. The new categories are "operatives, except transport" and "transport equipment operatives." However, separate data are not available as yet, because some time will

be needed before programming specifications for the computer tabulations can be revised to reflect this change. Data on the two categories probably will become available in January 1972; the revised data will not constitute a "break in series" since the 1971 total for operatives and kindred workers represents nothing more than the sum of the two new groups.

One change in titles is worth specific mention—the major group, managers, officials and proprietors, except farm has now been renamed managers and administrators, except farm. The term proprietors was dropped because they were included in the group only if they performed managerial duties.

Future implications

A number of problems arise as a result of the 1970 occupational reclassification. The biggest is the problem of the break in series. This problem cannot be resolved, as comparative data are available only for one point in time—the noncomposited March 1970 statistics that are presented in the full detail available in this publication. Hopefully, the making of this change at the beginning of the current calendar year will minimize the problems of the break in series that will occur for the major occupational categories. However, users of the data should not utilize the differences shown in the table to account for any unexplained variances in changes involving months before and after January 1971.

A future uncertainty will be the effect that these changes could have on the seasonal patterns of the major occupational group data. At this time, determination of whether the seasonal patterns of major groups will be altered by these shifts is impossible. Since most of the differences are small, however, the assumption is that no significant changes in seasonality will occur and that the seasonal adjustment procedures utilized in the past will continue to reflect accurately the trends of the revised groups. Special adjustment techniques will be instituted if subsequent experience—such as unusual month-to-month movements—indicates a need.

A more detailed discussion of the general background of the occupational classification system and an analysis of many of these classification revisions were described in the article, "The 1970 Census of Population Occupation Classification System," which appeared in the December 1969 issue of the Statistical Reporter, a monthly bulletin of the Office of Management and Budget. The article also provides a complete listing of the 441 occupations to be iden-

tified separately in the 1970 census. Copies of this article are available upon request to the Division of Statistical Policy and Management Information System, Office of Management and Budget, Washington, D.C. 20402.

The full detail of the 1970 classification system will be presented along with 1960 and 1970 census data in Chapter D of Volume 1, Characteristics of the Population, as part of the 1970 Population Census publication program.