COVERAGE OF POPULATION IN THE 1970 CENSUS: PRELIMINARY FINDINGS AND RESEARCH PLANS

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National Population

Introduction[1/]

At various times during the 1960's the Census Bureau or staff members of the Bureau issued various estimates of underenumeration of the population in the 1960 Census of the United States. The latest of these reports, published in 1967, indicated a net underenumeration of 5.7 million, or 3.1 percent of the estimated total population. This estimate was derived by the method of demographic analysis as compared with the use of reinterview surveys or record-check studies. Demographic analysis involves the manipulation of various types of demographic data such as census data, birth, death, immigration, and emigration statistics, etc. for purposes of analysis, estimation, or projection.

This estimate was viewed as a rough one although it seemed to be the best possible at the time. Just after publishing this estimate, new data on the aged population became available from the Social Security Administration's Medicare program. Data on the number of persons 65 and over enrolled for Medicare in 1967 permitted us to derive alternative estimates of the population 60 and over by age, sex, and color, on April 1, 1960. These estimates are believed to be more accurate than those previously used to represent the "true" population 60 and over in 1960. The coverage of the aged population by Medicare is substantially complete and proof of age is required. On the other hand, some persons may have been omitted by Medicare, and the tabulations must be supplemented for groups excluded by law from the program. Furthermore, the adjustment for seven years of population change between 1960 and 1967 is considerable and, hence, the accuracy of the estimates for 1960 depends heavily on the accuracy of the data on deaths and net migration. The use of the Medicare data makes a substantial difference in the overall estimate of underenumeration of the population in 1960. The estimates based on Medicare data suggest a reduction of 457,000 in the net undercount for ages 60 and over in 1960 and a corresponding reduction in the overall amount of net underenumeration, which then drops from 5,702,000 to 5,245,000. The overall rate in 1960 drops from 3.1 percent to 2.8 percent.

These revised estimates of the overall level of net underenumeration in 1960 remain preliminary, however, since a reexamination of the estimates of coverage in 1960, including a review of the basic data and assumptions, is under way and will be concluded only after we have had an opportunity to review this research with outside experts and after the evaluation of the 1970 Census has proceeded to a point where the age-sex-color patterns of net undercounts in the two censuses can be compared. In fact, we recently met with a group of specialists to review the procedures we used to estimate underenumeration in the 1960 Census. Principal areas for our reconsideration are the adjustments for the underregistration of births, the quality of the data on deaths and immigration, and the possibility of employing the Coale method of historical birth reconstruction to estimate the underenumeration of the nonwhite population.

In view of the limitations of the reenumerative and record-checking procedures (i.e., case-by-case matching studies) in establishing the level of underenumeration in 1960 and 1950, we have decided to employ demographic analysis as the principal basis for estimating the level of underenumeration in the 1970 Census. Some case-by-case matching studies will also be conducted and these will be employed in conjunction with the studies using demographic analysis in making the final evaluation. Because of their secondary role in measuring the extent of census coverage, I will describe the matching studies after I have discussed the use of demographic analysis for 1970.

Coverage of total population

Relative net underenumeration.--We now know the 1970 Census count of the total resident population of the United States and, hence, we can begin to develop estimates of the completeness of enumeration of the population in this census. The "true" total population in 1970 may be represented by the sum of the "true" figure in 1960 and the estimated change due to births, deaths, and net migration during the 1960-70 decade. Even assuming that we do not know the "true" population in 1960, a comparison of the estimated population in 1970, based on the 1960 Census count and the change during the decade, with the 1970 Census count, gives an indication of the amount by which net underenumeration in the 1970 Census exceeds or falls below net underenumeration in the 1960 Census, provided that the estimate of population change for the 1960-70 decade is free of error. The Census Bureau's published postcensal estimate of the resident population for April 1, 1970 (Series P-25, No. 445) was 203,657,000 and the census count was 203,185,000. If we accept these figures at face value, the implied net underenumeration in 1970 is 490,000 greater than in 1960. Since the above estimate of the population in 1970 was published, the estimate of intercensal change has been revised downward by 250,000 as a result of a corresponding downward revision of the estimate of net immigration. No changes have been made in the estimates of births and deaths. On this basis, the implied net underenumeration in 1970 is 240,000 greater than in 1960.

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Inasmuch as the estimate of intercensal change is important for this calculation, I want to make some comments regarding the quality of the data entering into this estimate.

1. The provisional data on births and deaths used for the most recent years of the decade in the present estimate are expected to differ very little from the final estimates of births and deaths for these years. The present estimate of intercensal population change is based on final statistics of deaths through 1967 and final statistics of births through 1968, and provisional data thereafter. This kind of revision has had little effect on the estimates in the past.

2. Registered births for the 1960-70 decade were adjusted for underregistration on the basis of factors obtained by extrapolation of the results of national tests conducted in 1940 and 1950. A new birth registration test conducted in 1969 and 1970 gives results which are quite comparable with those from the two previous tests and lends a measure of support to them. The 1969-70 Test provided estimates of the percent completeness of birth registration in 1964-68, by calendar year and by color. This test indicated that 98.9 percent of all births (99.2 percent white and 97.6 percent nonwhite) were registered in these years taken as a whole. These figures differ insignificantly from the figures used for this period to prepare the postcensal population estimates for 1970 published by the Census Bureau (99.0 percent total, 99.4 percent white, and 97.2 percent nonwhite). If we use the new measures of underregistration for these years to adjust the registered births for the 1960-70 decade, we arrive at an estimate of total births for this period which hardly differs from the previous estimate.

3. The number of deaths as registered for this decade has been accepted, without modification, even though we may reasonably assume that there is some underregistration of deaths. If we assume specifically, for illustrative purposes, that the rate of underregistration of deaths was one quarter as great as that for births during 1960-70 (an extreme assumption), we would increase the estimate of deaths, and reduce the estimate of intercensal change, by only 45,000. No national test of the completeness of death registration has been conducted.

4. As is reported by Irwin and Warren in another session of this conference, a reexamination of the estimate of net civilian immigration for the 1960-70 decade suggests that we ought to reduce the estimate of net civilian immigration implicit in the published population estimate for April 1, 1970 by about 250,000 (from 4,051,000 to 3,801,000).[2] This correction represents an allowance for both alien emigration and net departures of private citizens (i.e., those who have no affiliation with the Federal Government as workers or dependents of workers) to foreign countries, groups previously not allowed for in our estimates. The allowance for overseas movement of former residents may still be too low but we are unable to establish the figure more closely at this time. On the other hand, no allowance has been made for illegal immigration, and there are indications that it was sizeable during the 1960's. Because of the considerable uncertainty regarding the exact amount of migration, we plan to continue our reexamination of these data.

Absolute amount and rate of net underenumeration in 1970.--As I have said, our procedure for estimating the amount and rate of net underenumeration in 1970 depends on the amount or rate of net underenumeration in 1960 and the estimates of population change between 1960 and 1970. We can suggest the possible amount and rate of error in 1970, and particularly the comparative level of the percent error for 1960 and 1970, therefore, by positing various amounts of error in 1960 and various estimates of intercensal change, 1960-70 (or, alternatively, various assumptions regarding the change in coverage between 1960 and 1970).

Under nearly all the combinations of assumptions shown in table 1, the percent of net underenumeration declined between 1960 and 1970. If we accept a 1960 rate of net underenumeration of 2.8 percent (representing our latest published estimate of net underenumeration adjusted to take account of Medicare data for 1967), and an intercensal population change of 24,102,000, or 250,000 less than the published figure of 24,352,000 (corresponding to a coverage decrease of 240,000 between 1960 and 1970), then the 1970 rate is 2.6 percent. If the intercensal population change and net civilian immigration as originally measured for the 1960-70 decade are accepted (24,352,000 and 4,051,000, respectively), this implies that the additional ¼ million net "emigration" is offset by illegal immigration of about the same amount and that there was a coverage decrease of 490,000 between 1960 and 1970. Under these conditions given the rate of underenumeration of 2.8 percent in 1960, we would have a rate of 2.7 percent in 1970. Even if the rate of underenumeration in 1960 corresponded to the results of a composite of demographic analysis and the reinterview studies (2.6 percent)--viewed as a minimum reasonable estimate--the above two assumptions regarding the 1960-70 change in coverage would imply a decline in the rate of net underenumeration to 2.4 or 2.5 percent in 1970. We plan to conduct a thorough study of the components of these estimates, and the Bureau plans to make its official position known sometime in the next year or two.

A historical series of estimates of rates of net underenumeration, principally for white males and white females for 1880-1970, which I have computed partly on the basis of the data developed by Coale and Zelnik,[3] supports the view that the coverage of censuses has been improving, albeit irregularly, and that the 1970 Census had the lowest rate of net underenumeration over this period.

Demographic factors affecting coverage in the 1970 Census.--Although demographic analysis cannot shed much light on the socio-economic causes and correlates of census underenumeration, limited explanatory information is provided by the estimates of net undercount for age, sex, and color groups which we have developed for 1960. These estimates show that certain age-sex-race groups are more difficult to enumerate than others. We should, therefore, "expect" a higher overall rate of net underenumeration in 1970 than in 1960 if a larger proportion of the population falls in the more-difficult-to-enumerate categories in 1970 than in 1960. We have measured the potential effect of the shifts in the size and age-sex-color composition of the population between 1960 and 1970 by applying the rates of net undercounts for each age-sex-color group, as we have estimated them for 1960,4/ to the corresponding estimates of the "true" population in 1970.

The rate of net underenumeration might then be "expected" to rise from 2.8 percent in 1960 to 3.0 percent in 1970. The value for 1970 is purely hypothetical, of course. Since an intermediate "expected" overall rate (2.9) is secured in 1970 when the 1960 rates for all whites and all nonwhites (not by age and sex) are assumed for 1970, it is evident that the rise in the "expected" value between 1960 and 1970 is in part due to the shift in race composition and in part due to the shift in age and sex composition. In fact, however, the "actual" rate of net underenumeration in 1970 corresponding to these figures is 2.7 percent. Since the "actual" rate of net underenumeration apparently declined slightly between 1960 and 1970, it is clear that the 1970 Census succeeded in overcoming the "demographic" tendency for the rate to rise and even achieved some further improvement. (The effects of the geographic redistribution of the population between 1960 and 1970 on the "expected" overall rate of underenumeration are not known.)

Age, sex, and race distribution

In order to measure the extent of the net undercount for age-sex-race groups in 1970, we need to carry our estimates of the "true" population distributed by age, sex, and race in 1960 forward to 1970 on the basis of estimates of the population change for these specific categories between 1960 and 1970. Assuming that we have satisfactory estimates of "true" population by age, sex, and color for 1960, we now become concerned with the accuracy of our estimates of the age-sex-race distribution of "net immigrants" and deaths for the 1960-70 decade and, particularly, with any biases in the reporting of age of decedents. The age distribution of "net migrants" may be affected particularly by the accuracy of the estimates of the characteristics of migrants for which reported data are not available or by the omission of certain migrants from the totals (i.e., aliens entering illegally).

In general, however, the component of deaths is a far more important one than the component of net immigration; net migration is numerically dominant only in the ages of very low mortality. A comparison of age as reported on death certificates and age as reported in the census for persons who died in a 4-month period following the 1960 Census indicated some marked differences and suggested some substantial errors in age reporting.5/ If the percent differences between deaths at each age observed in these four months were assumed to apply to the whole decade 1950-60, and census age of decedents were substituted for death-certificate age, the percents of net undercount in 1960 for nonwhites would be increased by about 2 percentage points for the age group 55-59, nearly 4 percentage points for the age groups 60-64, and about 3 percentage points for the age group 65 and over. At present there are no plans for a more current study designed to evaluate age on death certificates, whether by comparison with age as reported in the census or with age as reported for beneficiaries in social security records.

Research plans.--We have already alluded to some studies we are carrying out to ascertain the "true" population in 1970 and its characteristics in terms of age, sex, and race. Several additional studies will be undertaken; some of these will provide actual estimates of net undercounts and others will provide definite indications of "weak" spots in the census data. The studies employing demographic analysis include the following:

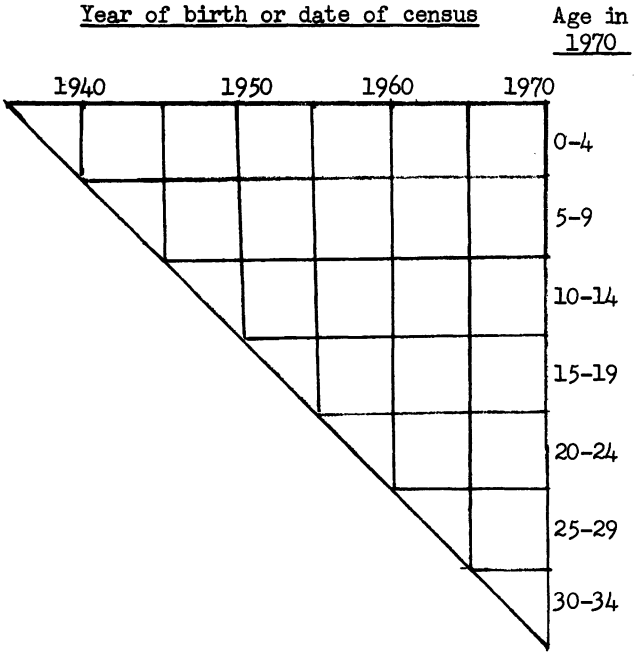
1. We want to reexamine the procedure previously used to estimate expected sex ratios (ratios of males to females) for 1960 and then extend these expected sex ratios, revised as necessary, to 1970. We will reexamine particularly the mortality component employed in estimating the expected sex ratios at the older ages, and seek to determine the effect of using alternative levels of mortality in general and life tables based on population figures corrected for net census undercounts in particular. It should be recognized that the available life tables are based essentially on death statistics and population census data as reported without adjustment for undercounting or misreporting with respect to age, sex, or race. We need to reexamine the survival rates again to note whether these errors have any substantial effect on the expected sex ratios.

2. Second, we will compare estimates of the "true" population 65 and over on April 1, 1970, by age, sex, and color, based on enrollments for Medicare for 1969 and 1970, with the census counts for these categories. Again, the Medicare data will require supplementation for groups excluded from the program. These data can also be used to estimate the population 55 and over by age, sex, and color in 1960. Accordingly, recalling the estimates for 1960 based on Medicare data for 1967, we will have two estimates of the population 60 and over in 1960 and two estimates of the population 70 and over in 1970, which can be

compared. As was suggested earlier, because of the considerable changes which occurred in the aged population over these years, adjustment of the Medicare figures to represent the population at earlier or later dates necessarily introduces some additional error into the estimates. For example, the population cohort 65 and over in 1960 declined by 39 percent by 1967 (when it was aged 72 and over) and the population cohort 55 to 59 in 1960 declined by 18 percent between 1960 and 1970 (when it was aged 65 to 69).

It is possible that Medicare data for 1970 are relatively more complete than the data for 1967, simply because of the historical development of Medicare as a registration system. If this is true, the estimates based on Medicare data for 1970 would tend to state the population more completely than the estimates based on Medicare data for 1967. The difference between the estimates of "true" population 65 and over, by age, sex, and color, for 1967 and 1970 can be compared with the estimates of population change for 1967 to 1970 based on death and migration statistics, in order to evaluate the accuracy of the two bases of estimating change in the aged population.

3. Third, we plan to compare the pattern of errors in the 1960 and 1970 Censuses in order to improve the estimates of the errors in both censuses. Specifically, we will be able initially to compare the pattern of errors for young persons in four censuses covering all cohorts born since 1935, i.e., children under 5 in 1940, children under 15 in 1950, children and youth under 25 in 1960, and persons under 35 in 1970. We may sketch these cohort relationships as follows:



These are the cohorts for which we believe we have quite satisfactory estimates of the number of births (births since 1935), and, hence, for which we believe we can make rather accurate estimates of the population at several successive census dates. We could attempt to apply the Coale iterative procedure (used previously to estimate the "true" nonwhite female population for 1950 aged 15 and over on the basis of the censuses of 1930, 1940, and 1950), to estimate the net undercount rates at ages 35 and over in 1970, assuming some relationship between the patterns of net undercount by age in 1960 and 1970. Note also that we will have estimates of the net undercounts for the population 55 and over by age, sex, and color in 1960 and 65 and over in 1970 from the Medicare data.

4. We plan once again to compare tabulations of Social Security account holders with census counts tabulated by age, sex, and color. In spite of the limitations of this comparison (e.g., incomplete coverage of the population by Social Security, particularly certain age-sex-color groups; incomplete elimination of deaths and duplicate cardholders, etc.), we should be able to detect certain areas of serious omission.

5. Because of the difficulties in establishing the "true" size of the aged population in past censuses, we plan to apply the "method of extinct generations."[6] This method involves reconstructing the aged population for an earlier date by cumulating deaths from the oldest ages and most recent years backward to younger ages and earlier years. The population 65 and over for about 1940, and the population 75 and over for about 1950, can now be estimated by this method since nearly all members of this group have died. The precise accuracy of reporting age for these decedents is not important since a cumulative age group of deaths is used for each year (e.g., 72 and over, 73 and over, etc.). The method would give estimates only for the oldest population groups and with a considerable lag in time.

6. We want to investigate the possibility of employing the Coale method of historical birth reconstruction[7] to derive improved estimates of net undercounts by age and sex for the nonwhite population 25 to 54 or 64 in 1960. In this procedure data from a number of censuses are used to generate several estimates of births for each year or period from, say, 1855 to 1934 (after which date the estimates are based on birth registration data). A "best" estimate of births is derived for each year or period and then carried forward to each later census date by survival rates.

7. We want to examine the effect of assuming an alternative annual trend in the improvement in birth registration from 1935 on, including the effect of incorporating the results of the 1969-70 test.

8. As soon as the final census counts of the age, sex, and race distribution of the population of the United States for April 1, 1970 are

available from the computers--and this should occur early in 1971--we shall be able to make our first very preliminary estimates of the net census undercounts in terms of (abridged) age groups, sex, and race. We may employ for this first analysis estimates of the "true" population for 1970 10 to 64 years of age based on the estimates of the "true" population for 1960 which we published in 1967, estimates of the population 65 and over based on the Medicare data for 1970, and estimates of children under 10 based on births between 1960 and 1970. Since the estimates of the population under 35 years of age in 1970 are based directly on birth, death, and migration statistics, and since the estimates of the population 65 and over are based directly on registration data, we will have a rather firm basis for measuring the undercounts for these groups, covering about two-thirds of the population.

Special Match Studies

Two special studies in the 1970 Census Evaluation Program, the Census-CPS Match Study and the Census-Medicare Match Study, may contribute to our knowledge of the extent of undercoverage of the population in the 1970 Census even though they are not expected to provide acceptable over-all measures of the completeness of coverage.

1. The Census-CPS Match. A sample of households enumerated in the March 1970 Current Population Survey will be matched with the census returns. The study will provide national estimates of missed housing units and of persons missed in those housing units on the basis of a match of all CPS units with the Census, and estimates of missed persons in enumerated housing units on the basis of a sample of about 10,000 occupied CPS units. The matching operation is being conducted now and there will be a reconciliation of differences in the field in February and April, with a determination of the reasons for the differences. The CPS coverage of persons in enumerated units will be assumed to be correct and a two-way reconciliation with the census will not be carried out. Although estimates of the number and proportion of missed persons (as shown by CPS) will be secured in this match study, in view of previous experience with reinterviews and record checks, it is not expected that this study will provide an adequate estimate of underenumeration in the census. The Census-CPS Match will also provide information on the accuracy of reporting of various characteristics including age, sex, and color or race.

2. Census-Medicare Match. A systematic sample of 8,000 individuals from the Medicare records will be matched with the census schedules to measure the coverage of persons 65 and over in the census and the accuracy of census reporting of age by sex and race in this age range. Again, assuming that coverage of the population by Medicare is correct, there will be only a one-way reconciliation between the census and Medicare records. This match study will directly provide estimates of the number and proportion of persons included in the Medicare rolls who were missed in the census; but, with an appropriate assumption, it will also be possible to estimate the total number missed and the "true" number of persons 65 and over.

The 1970 Census reenumerative study ("Content Reinterview Study") will not attempt to determine the completeness of population coverage in the census as did the 1960 Census reenumerative study, but will try only to measure the accuracy of reporting of various characteristics (not including age, sex, color or race).

Regional Estimates of Coverage

We are acutely aware of the interest on the part of many users of census data in estimates of coverage for various geographic units within the United States. In the absence of such estimates for 1960, a number of users have inquired about the propriety of applying the available national estimates by age, sex, and color for 1960 to particular areas in 1960, and some have actually done this. In addition to the fact that the estimates are rough, even as national estimates, the level of the net undercount for a particular age-sex-color group must be assumed to vary widely from area to area and we have no way of measuring this variation satisfactorily.

We know little in formal quantitative terms about geographic variations in coverage. We learned from the Census Evaluation Study of 1960 that the rates of omission of persons in missed housing units were greater for the open country and the very large cities than for suburbs, smaller cities, and towns. The record-check studies of 1960 suggested that, among the four regions, the rate of gross omissions was greatest in the South. Procedural difficulties in taking censuses have been greatest in the inner zones of the very large cities of the North East and North Central Regions, but perhaps the coverage problem is only most visible in these areas. For example, could it be that underenumeration is also relatively great in the urban and rural slums of the South?

I do not know whether it is possible to measure underenumeration for geographic units within the United States satisfactorily. The problem of deriving accurate estimates of the "true" resident population of geographic units at any level may be insurmountable. Use of the conventional component method requires data on internal migration, for which the census itself is the only source. (On the other hand, the national population is a relatively closed population.) We do, however, plan to conduct research to determine the feasibility of measuring underenumeration at the subnational level, particularly for geographic Divisions and possibly States. The measurement problem for areas within States is even more difficult and would involve very different methods. Although we plan to investigate this matter too, it seems very likely that the measurement error here is much greater than the error we are trying to determine.

Two component procedures may be considered for geographic Regions, Divisions, and States. We may try to develop estimates of the expected native resident population of each area under 35 years of age in 1970, on the basis of birth statistics since 1935, life table survival rates, and data on State of birth of the native population from the 1970 Census itself, and compare these estimates with the 1970 Census figures for the resident native population of the area. Or, we may try to develop estimates of the expected native population in 1970 under 35 years of age born in each area on the basis of birth statistics and life table survival rates, and compare these estimates with the population born in the area as indicated by the census. The former comparison is more appropriate to our needs--providing estimates of net underenumeration of the 1970 resident population of each area although limited to ages under 35--but the expected population is based on census data which are themselves subject to underenumeration. Any calculation of this kind must, therefore, allow for underenumeration of migrants, recognizing differential underenumeration by migration status and by State of birth or State of residence. The second comparison will provide indications of geographic variations in coverage but for populations which sometimes bear little relation to the present resident population of States or Divisions. (In 1960 about one-quarter of the population was not living in its State of birth.)

In these experimental calculations we would use as working units States, by color, sex, and 5-year age groups under 35 years of age. Given the limitations of the data and the method, we would hope to secure estimates of underenumeration for the following categories at most: each State, total population under 35; each geographic Division, population by color and 5-year age groups under 35; each Region, population by color, sex, and 5-year age groups under 35. We also want to try to estimate the difference in the rate of coverage for urban and rural areas, for Regions and the United States as a whole. The method in the latter case would not be a component one but would assign part of the underenumeration for each State (age, sex, and color group) to the urban and rural sectors or would involve use of regression analysis. Given the kind of data required and the scope of the calculations, results cannot be expected before early 1973. Whether these will be sufficiently accurate to justify publication remains to be seen.

List of Notes

1. This paper uses as a point of departure the following papers: (1) Jacob S. Siegel, "Completeness of Coverage of the Nonwhite Population in the 1960 Census and Current Estimates, and Some Implications," Social Statistics and the City, David M. Heer, Editor, Report of a Conference Held in Washington, D. C., June 22-23, 1967, Joint Center for Urban Studies of the Massachusetts Institute of Technology and Harvard University, 1968; (2) Jacob S. Siegel and Melvin Zelnik, "An Evaluation of Coverage in the 1960 Census of Population by Techniques of Demographic Analysis and by Composite Methods," Proceedings of the Social Statistics Section, 1966, American Statistical Association; and (3) Eli S. Marks and Joseph Waksberg, "Evaluation of Coverage in the 1960 Census of Population Through Case-by-Case Checking," Proceedings of the Social Statistics Section, 1966, American Statistical Association.

2. Richard Irwin and Robert Warren, "American Immigration in the Sixties," paper presented at the annual meeting of the American Statistical Association, Detroit, Michigan, Dec. 29, 1970.

3. Ansley J. Coale, "The Population of the United States in 1950 Classified by Age, Sex, and Color--A Revision of Census Figures," Journal of the American Statistical Association, 50(269):16-54, March 1955; and Ansley J. Coale and Melvin Zelnik, New Estimates of Fertility and Population in the United States, Princeton, N. J., Princeton University Press, 1963.

4. Siegel, op. cit. The rates used for 1960 for ages 60 to 64 years and 65 years and over are based on Medicare data.

5. M. G. Sirken, J. S. Siegel, and R. S. Murphy, "Errors in Postcensal Population Estimates Due to Age Reporting Errors on Death Certificates," paper presented at 1969 Annual Meeting of the Population Association of America, Atlantic City, New Jersey, April 12, 1969.

6. Paul Vincent, "La Mortalité des Vieillards" (The mortality of the aged), Population (Paris), 6(2):181-204, April-June 1951; and Ira Rosenwaike, "On Measuring the Extreme Aged in the Population," Journal of the American Statistical Association, 63(321):29-40, March 1968.

7. Siegel and Zelnik, op. cit., p. 72; and Coale and Zelnik, op. cit., pp. 5-14.

Table 1.--Estimated Amount and Percent of Net Underenumeration in 1970, for Various Amounts and Percents of Net Underenumeration in 1960 and Various Amounts of Change in Coverage between 1960 and 1970

(Numbers in thousands. Base of percent is corresponding estimate of corrected population)

Underenumeration, 1960	1970 net underenumeration according to the 1960-70 change in amount of coverage		
	No change in coverage[1]	Coverage decrease of 240,000[2]	Coverage decrease of 490,000[3]
Amount			
5,702[4]	5,702	5,942	6,192
5,245[5]	5,245	5,485	5,735
4,744[6]	4,744	4,984	5,234
3,328[7]	3,328	3,568	3,818
Percent			
3.1[4]	2.7	2.8	3.0
2.8[5]	2.5	2.6	2.7
2.6[6]	2.3	2.4	2.5
1.8[7]	1.6	1.7	1.8

[1]Assumes a postcensal estimate of 203,185,000 for the resident population on April 1, 1970, implying 23,862,000 population increase and 3,561,000 net civilian immigration for 1960-70 (490,000 less than "published" in Current Population Reports, Series P-25, No. 445).

[2]Assumes a postcensal estimate of 203,425,000 for the resident population on April 1, 1970, implying 24,102,000 population increase and 3,801,000 net civilian immigration for 1960-70 (250,000 less than "published" in Series P-25).

[3]Assumes a postcensal estimate of 203,675,000 for April 1, 1970, implying 24,352,000 population increase and 4,051,000 net civilian immigration (as "published" in Series P-25).

[4]Estimate based on demographic analysis. See Siegel, op. cit.

[5]Estimate based on demographic analysis and Medicare data.

[6]Estimate based on composite of results from demographic analysis and reinterview surveys. See Siegel and Zelnik, op. cit.

[7]Estimate from reinterview surveys. See Marks and Waksberg, op. cit.