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MEMORANDUM

May 16, 2005

To: Seminar Members, "Reconsidering the Federal Poverty Measure"

From: Douglas Besharov and Gordon Green

Summary of Session #6: Indicators of Deprivation and Well-Being in Modern America

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       The sixth seminar on "Reconsidering the Federal Poverty Measure" was held at the American Enterprise Institute on March 8, 2005. The seminar focused on three presentations that dealt with different aspects of measuring deprivation and well-being. Nicholas Eberstadt, Henry Wendt Chair in Political Economy, American Enterprise Institute, gave a presentation on "Indicators of Deprivation and Well-Being in Modern America: A Look Beyond the Poverty Rate." Jennifer Madans, National Center for Health Statistics (NCHS), Centers for Disease Control and Prevention, gave a presentation on "Poverty and Health." (Madans had two co-authors for the NCHS presentation: Kimberly Lochner and Diane Makuc.) Kurt Bauman, Population Division, U.S. Census Bureau, gave a presentation on "Trends in Material Well-Being in the 1990s: Indicators from the Survey of Income and Program Participation." Comments on the statistical methodology used by Kurt Bauman, concerning odds ratios, were provided by Arthur Kirsch, former Chairman of the Department of Statistics and Professor Emeritus of Statistics and Psychology at George Washington University.

Nicholas Eberstadt's Presentation

       Eberstadt noted that he has been working on the subject of statistical measures of poverty for about twenty years, and that he has compiled a series of indicators that bear on the poverty rate as a measure of material well-being. He said that the first part of his presentation dealt with material well-being, and the second part presented some experimental measures that concern subjective well-being (such as happiness).

       Referring to trend lines in poverty rates for families, children, and the elderly from 1959 to 2001, Eberstadt noted that many analysts view the poverty rate as an indicator of material

deprivation. The presumption is that there should be close correspondence between household income and household consumption, and that the way the poverty measure is configured and adjusted for inflation should give a consistent measure of how the poor have been doing over time. Eberstadt noted that since 1973, the poverty rate has not budged much for the total population and has actually gotten worse for children. Some analysts have interpreted this to mean that we have gone through a generation with no progress against poverty, that is, no "trickle down" of the benefits of economic growth to lower-income people. Eberstadt said that if this were the only statistic we had to look at, we would be tempted to agree with this conclusion.

Eberstadt presented four indicators that should influence the poverty rate. The unemployment rate was slightly lower in 2001 (4.7 percent) than in 1973 (4.9 percent). On the other hand, per capita income (in 2002 dollars) was significantly higher in 2003 ($22,970) than in 1973 ($14,291). Educational attainment increased significantly over this time period, with the percent of people over age twenty-five having a high school degree being much higher in 2003 (84.1 percent) than in 1973 (59.8 percent). Finally, total anti-poverty spending (technically, total non-medical means-tested government spending), expressed in 2002 dollars, was much higher in 2003 ($230.6 billion) than in 1973 ($109.0 billion). Eberstadt noted that it is puzzling that the poverty rate did not decrease during a period when these other indicators were indicating progress.

To address this issue, Eberstadt ran a series of regressions with the poverty rate as the dependent variable and per capita income, the unemployment rate, percent of persons with a high school education, and total anti-poverty spending as the independent variables. His regression covered twenty-nine years (data for 1974 had to be excluded because of a lack of information on anti-poverty spending). Running the regressions on combinations of the four independent variables, and then all variables together, Eberstadt noted that several of the coefficients had the wrong sign as opposed to what economic theory would predict. For example, when all four variables were included, the coefficient on per capita income had the correct sign, but the unemployment rate, percent of persons with a high school education, and total anti-poverty spending all had the wrong sign. Eberstadt concluded that something unusual was going on with the poverty rate after 1973.

Referring to a chart that showed reported annual consumption and reported annual pre-tax income from the Consumer Expenditure Survey (CEX) between 1960–61 and 2002, Eberstadt noted that there have been several unusual developments. (For his comparisons, Eberstadt expressed all dollar amounts in 2002 constant dollars.) In 1960–61, the lowest quartile of families had annual consumption expenditures ($10,756) that were only 12 percent higher than their annual pre-tax income ($9,613). By 1972–73, the lowest quintile of families had annual consumption expenditures ($12,166) that were 39 percent higher than their annual pre-tax income ($8,719). And, by 2002, consumer units in the lowest quintile had annual consumption expenditures ($19,061) that were 129 percent higher than their annual pre-tax income ($8,316). Thus, after adjusting for inflation, there has been a growing discrepancy between consumption expenditures and pre-tax income, with households in the lowest quintile now consuming well over

twice their reported annual income.

Questioning whether these unexpected results might be due to inaccurate income data collected in the CEX, Eberstadt examined income data from the March Current Population Survey (CPS). Although pre-tax income in the CPS is slightly higher than in the CEX, there are still large differences between annual expenditures and income for households in the lowest quintile, and the gap has been growing larger over time. Eberstadt listed four factors that might contribute to the expanding gap: (1) changes in survey methods or procedures, (2) increased importance of noncash benefits, (3) increased importance of unreported income or gifts, and (4) increased year-to-year variations in household income.

Eberstadt presented data from the Survey of Income and Program Participation (SIPP) on episodic poverty (one month) versus chronic poverty (forty-eight straight months). While many different demographic and socioeconomic groups experienced episodic poverty, a lower percentage experienced chronic poverty. More than half of the poverty spells during 1996–99 lasted 2–4 months, and less than one-fifth lasted 5–8 months. The percentages generally diminish for longer time periods but increase slightly for people who were poor for 2–3 years (3.5 percent) or more than three years (5.7 percent). Eberstadt noted that data on the duration of poverty spells do not reveal anything about the variance in income.

To address the variance of income, Eberstadt referenced work by Jacob Hacker based on the Panel Study of Income Dynamics (PSID). He presented a chart showing that during 1969–98 there was an increase in both the variance and transitory variance of family income, although the variance seems to have peaked in 1993 and declined somewhat thereafter.

There were a number of questions from the seminar members about changes in the variance of income from the PSID. Douglas Besharov asked Eberstadt for an interpretation of what the observed development means, and Eberstadt replied that if the trend were corroborated, it could help explain the increasing discrepancy between expenditures and income at the lower income levels. Besharov noted that people may be behaving in a manner that smooths their consumption, and we should take a closer look at the period from 1993–98 to understand what has been going on. Wade Horn noted that the number of single parents has increased significantly in recent years, and some of these families may be making things in the home rather than buying them. Michael O'Grady observed that income variance seems to be increasing for the population as a whole, not just the poor, so other factors may also be at work. Robert Rector noted that Medicaid and Medicare were not included in the comparisons, and since these benefits were limited in the 1970s and large in the 1990s, accounting for them could increase the disparities by even more. Robert Reischauer observed that the period from 1990–98 was quite interesting, but it is hard to believe that the recession was the principal cause because the variance in family income did not increase during the early 1980s. Eberstadt noted that the PSID was the only data source he found that displayed this trend, and Dan Weinberg cautioned that we need to look for other evidence before we refer to this development as a trend because there were large design changes in the PSID in 1997.

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Eberstadt presented statistics from the 1960–61 and 2002 CEX showing the composition of consumer expenditures for all families and those in the lower-income categories. The percentage of expenditures for food (at home), housing, transportation (public), and health and medical care was slightly over 70 percent for all families in both 1960–61 and 2002. The comparable percentages were higher for families in the lowest quartile in 1960–61 (about 80 percent) and for consumer units in the lowest quintile in 2002 (also about 80 percent). Eberstadt also presented a table showing that the percentage of household spending allocated to food decreased with higher levels of income in 1960–61 (with the exception of a slight increase for households with annual income of $1,000–$1,999 compared to those with less than $1,000).

Eberstadt presented a number of statistics illustrating improvements in the health status of the population, especially for low-income persons. The percentage of the total population that is underweight (defined as having a body mass index of less than 18.5) declined steadily from 1960 to 2002 (to about 2 percent of the population). Similarly, the percentage of medically examined low-income children who are of short stature or underweight declined from 1973 to 2003 (to slightly more than 5 percent for both statistics). The percentage of medically examined low-income children with low hemoglobin count declined during the same time period (down to slightly more than 10 percent). In contrast, obesity among women 20–74 years old has become more of a problem, especially for those with income below the poverty line (in 1999–2002 the percentage was more than 40 percent).

Drawing on a number of statistics reflecting living conditions, Eberstadt concluded that there have been significant improvements since the early 1970s for both nonpoor and poor households. Crowding within housing units has decreased and the availability of major appliances has increased for both groups. Moreover, the percentage of poor families without a car in 1972–73 (57 percent) was significantly higher than in 2003 (38 percent).

Eberstadt presented a number of statistics on health that showed improvements during the past several decades, even during times when the poverty rate fluctuated. For example, even though the poverty rate for white children moved up and down with the business cycle over the past few decades, the infant mortality rate continued its steady decline. From 1950 to 2001 the rate declined from more than twenty-five children to about five children per 1,000 population. The decline in infant mortality occurred even though low birth weight among white children increased slightly in recent years. Besharov speculated that these trends reflect the influence of increased spending on medical care, and Eberstadt agreed that increased health intervention has definitely played a role. O'Grady noted that increased health insurance coverage and improved technology also probably contributed to the improved situation.

In addition, Eberstadt presented statistics showing reductions in age-adjusted mortality rates for the population 25–64 years old, a reduction in the proportion of the population with untreated dental caries, and a reduction in the proportion of the population sixty-five years old and over with no remaining teeth. Moreover, the percentage of children under eighteen years old without a health care visit in the past year declined significantly over the past several decades,

although in 2002 the percentage was still higher for children under 200 percent of the poverty level (about 15 percent) compared to children above 200 percent of the poverty level (about 10 percent).

In summary, Eberstadt noted that indicators of material well-being show improvements in housing, nutrition, ownership of appliances and cars, and health status for the poor over the past several decades, despite the lack of change in the official poverty rate.

Progressing to the second part of his presentation, Eberstadt presented a number of statistics on subjective measures of well-being (such as happiness). A chart from a study by Richard Layard, showing the relationship between happiness and income level for several western countries, indicated that people in countries with a per capita income of less than $10,000 tend to be less happy than those in countries with a per capita income of more than $10,000, but beyond this level additional amounts of per capita income do not lead to significant increases in happiness. Moreover, for the United States in particular, even though real Gross Domestic Product (GDP) has increased significantly over time, the percentage of the population describing itself as "very happy" has actually declined. Suicide rates, which is another indicator of unhappiness, were high during the Great Depression, increased from 1950 to 1980, but have generally declined since then (with the exception of a small up-tick in 2000).

Eberstadt summarized the research on happiness with a chart from Richard Layard that compares the importance of various factors leading to a fall in happiness. A one-third decline in family income is a much less important cause for a fall in happiness than factors such as divorce or separation, being unemployed, having diminished health or less personal freedom, or not thinking that "God is important in my life." Richard Bavier asked if a decline in family income by a third referred to a decline in transitory or permanent income, and Eberstadt replied that he did not know. Steve Landefeld noted a complication in interpreting such statistics because people who can see say that would be much less happy if they became blind, and, yet, people who are blind do not seem to be significantly less happy than people who can see.

Using data from the Bureau of Justice Statistics, Eberstadt noted that the total crime rate in the United States increased between 1965 and 1990, from more than 2,000 to about 6,000 per 100,000 population, but declined thereafter, down to about 4,000 per 100,000 population in 2002. (The trend in violent crime showed a similar pattern, but at a much lower level—in 2002 about 500 per 100,000 population.) The homicide rate has declined significantly between 1990 and 2002 from about ten to less than six per 100,000 population, but is still higher than a generation ago. Statistics on robbery indicate a convergence of robbery rates around the world, as the robbery rate has declined for the United States but increased for countries in the OECD.

Eberstadt noted that there has been an extraordinary increase in the U.S incarceration rate in recent decades. From 1977 to 2003 the incarceration rate increased from about 125 to about 480 per 100,000 population. The size of the population in prison or jail in the United States in 2003 stood at about 2,100,000. The percentage of black men incarcerated is much higher than

that of whites or Hispanics. More than one-tenth of black men 20–40 years old are in prison. Eberstadt noted that the incarceration rate for Hispanics and women in general is also on the rise. He presented a startling statistic from the Bureau of Justice Statistics: "Based on current rates of first incarceration, an estimated 32 percent of black males will enter State or federal prison during their lifetime, compared to 17 percent of Hispanic males and 5.9 percent of white males." O'Grady asked if this was an increasing trend, or whether it was topping out, and Eberstadt replied that he did not know. Eberstadt added that the average prison sentence is about four and one half years, the average sentence served is about half that, and the re-arrest rate is quite high for people who are released.

Eberstadt then presented an indicator on the dependence of the population on means-tested government benefits. Data from the U.S Census Bureau indicate that in 2002 the percentage of households receiving noncash benefits (about 20 percent) was much higher than the percentage receiving cash aid (about 5 percent). Moreover, since 1999, the percentage of households receiving noncash benefits has been increasing while the percentage receiving cash aid has been declining.

Data on marriage rates and family stability reveal some interesting trends over the past several decades. Eberstadt noted that the odds of entering a first marriage between the ages of fifteen and forty-nine declined significantly during the 1970s, and have leveled off at about 700 per 1,000 population since then. In general, marriage rates have trended downward since about 1980, and divorce rates have declined as well. There has been a huge and steady increase in the percentage of children born to unmarried women in the United States between the early 1950s (less than 5 percent) and 2002 (almost 35 percent). Concomitantly, there has been a progressive decline since 1980 in the percentage of children living with both biological parents. In recent years, the percentage has been more than twice as high for white children (more than 60 percent) than for black children (about 25 percent). All told, a child in the United States could expect not to live with both biological parents for about five years out of the first fifteen years of his or her life, a much longer period than for many other western countries. Eberstadt noted that the abortion rate has declined since 1980, but still remains at a high level.

Religiosity has declined in the United States, as indicated by the percentage of Americans who describe themselves as Judeo-Christians. From the 1970s to 2002, the percentage declined from over 90 percent to about 80 percent. Eberstadt noted, however, that the United States remains a far more religious country than most other western nations. Almost 60 percent of Americans agree that "religion plays a very important role in my life," compared to slightly more than 30 percent of British, less than 30 percent of Italians, 20 percent of Germans, and slightly more than 10 percent of the French. There was a significant decline between 1960 and 1980 in the percentage of the U.S. population that said they belong to a church, but the trend has leveled out since 1980. There are some discrepancies in the percentage between Gallup polls (slightly less than 70 percent) and church records (about 60 percent).

Eberstadt suggested some additional indicators that he thought could supplement the

poverty rate as a measure of deprivation. Although he presented data on national four-year cumulative foreclosure rates for all FHA loans originated during fiscal years 1980–1998, he thought that these data were not all that useful. Instead, he suggested some possible additional indicators on (1) age-standardized mortality by poverty status, (2) incarceration/probation-free life expectancy trends, (3) trends and characteristics of population suffering, (4) financial emergencies (bankruptcy, eviction, repossession, utilities shutoff, etc.), (5) trends/characteristics of "no fixed address" population, (6) trends in rates of total first marriage and total first divorce, (7) trends in children living with both biological parents, (8) indicators of religion in personal life, and (9) deprivation indicators for Native American/Indian reservation populations.

Group Discussion

Seminar members commented on Eberstadt's list of possible additional indicators. Katherine Wallman noted that the Decennial Census cannot collect information on religious affiliation or participation. However, information on religious participation may be collected in other federally sponsored studies. She also said that she thought more recent data were available on children living with both biological parents, and Robert Kominski added that data for 2001 were released a few weeks earlier. Besharov noted that many of the possible indicators that Eberstadt mentioned look like they are related to behavior, not income. Eberstadt responded that many of the indicators are not driven by income, but may have a lot to do with income. Rector noted that rather than being preoccupied with how to count money correctly, more attention needs to be devoted to understanding trends in these additional indicators over time.

Concerning the data on foreclosures, John Weicher noted that the data go back forty years but the secular trend in home ownership has increased significantly, which will result in more foreclosures. Therefore, the data on foreclosures may not be indicative of fundamental economic change. Eberstadt asked if data on foreclosures are shown by demographic characteristics, and Weicher responded that they generally are not because they are used as financial indicators.

Weinberg stressed the need to isolate a few key indicators because if too many are presented they will cause confusion. Eberstadt suggested that there is merit in looking at indicators on health (perhaps one or two), crime or physical security, and consumption, because these would present a more holistic approach.

Besharov said that many data sets do not have good income data, making it difficult to obtain accurate measures of well-being. Rector added that, in many cases, the income data are included in various surveys, but not used as often as they could be used. Jennifer Madans noted that the situation is mixed—some surveys contain income data, some do not, and the quality of the data varies.

Rector commended Eberstadt for presenting an interesting chart showing the increasing disparity between income and consumption in the lowest decile over time, and speculated that this may be an indication that the quality of survey data for the lower portion of the income

distribution may be suspect. Weinberg reminded everyone that the number of college students has grown tremendously since 1960 (when the chart begins), and this may be a group that is consuming much more than their income. David Johnson noted a methodological change in the way data are collected in the CEX that could be affecting the comparisons. In 1960–61, the CEX asked about annual income and annual expenditures, but it now asks for quarterly income and quarterly expenses. Sub-annual data collection can result in underreporting of income. In addition, many self-employed people are located in the lowest income quantile, and some of the disparity may be due to income misclassification. Johnson said that a more accurate approach might be to show consumer outlays rather than consumer expenditures, as Bauman has done in earlier approaches. Besharov added that some of the disparity could be caused by the fact that we are counting money income and comparing it against expenditures that include not only cash but also noncash elements.

Jennifer Madans's Presentation

Jennifer Madans noted that NCHS is interested in the definition of poverty in the context of the Department of Health and Human Services's (HHS) Healthy People 2010 initiative. NCHS is interested in the connection between poverty and health along several dimensions: factors that influence health, why poverty and income are related to health (including mechanisms and reverse causation), and the selection of appropriate health indicators. Her presentation included a discussion of how NCHS collects information on income and poverty, the correlation of selected health indicators and poverty status, and a discussion of data issues and limitations. Many of the health indicators have shown improvement for the poor over the past few decades; however, health disparities still exist between the poor and nonpoor.

Madans noted that since its early work, NCHS has always had an interest in the connection between income and health. As part of HHS's Healthy People 2010 initiative, which builds on similar initiatives pursued over the past two decades, a major function of NCHS is to monitor whether health disparities between different groups are being reduced over time. NCHS also has other groups and researchers who are interested in the mechanisms linking income and health and how health disparities can be reduced.

Madans presented a chart showing the interrelationship between health and a variety of other factors: income, education, early life experiences, environment and living conditions, human biology and genetics, health behaviors, psychological and psychosocial factors, and health insurance and health care. She said that she will focus on the relationship between health and income, but there are many complex relationships with other variables. For example, health can be viewed as a social variable, and it is important to know if a lack of health affects a social function, such as the way people interact in society. As another example, if educational attainment affects health expectations, this may confound the relationship with other variables. She noted that these factors affect how we conceptualize and measure health, and that there is a risk of misinterpreting the data because many of the variables are correlated.

Madans identified the major surveys used to select health indicators. The National Health and Nutrition Examination Surveys (NHANES), which have been conducted periodically since 1971 and continuously since 1999, have a sample of about 5,000 persons per year and are used to measure health outcomes through in-depth physical examinations and testing (blood and urine samples) and data collection about individuals. The National Health Interview Survey (NHIS) is a much larger survey (40,000 households) that has been conducted continuously since 1957 and collects information through personal interviews about self-reported health problems and subjective assessments. In combination with NHANES, the NHIS helps to present a more complete picture of health status. Madans said that criteria for selection of health indicators for this presentation include the consistency of data over time, the range of indicators provided, and whether income data are also available.

Madans discussed the collection of income data in the NHANES and NHIS. She said that information on individual earnings is collected in the NHIS as well as family income sources. To obtain a total family income amount, follow-up questions are asked about the income category for nonrespondents, and unknown income has been imputed since 1990 in the NHIS. Income nonresponse has been lower in NHANES than in the NHIS. Information is also collected in both surveys about program participation. Additionally, information was presented on measured health indicators and self-reported health indicators. Measured health indicators include hypertension, serum cholesterol, obesity, untreated dental caries, and blood lead levels. Self-reported health indicators include activity limitation, self-rated health status, and health care utilization.

Madans noted that life expectancy has been increasing over the past century for both men and women, both at birth and at sixty-five years of age. For males, life expectancy at birth was much higher in 2001 (74.8 years) than in 1901 (47.9 years); at age sixty-five life expectancy was also higher in 2001 (16.8 years) compared to 1901 (11.5 years). The trends were similar for females: life expectancy at birth was much higher in 2001 (80.1 years) than in 1901 (50.7 years); and at age sixty-five life expectancy was higher in 2001 (19.8 years) than in 1901 (12.2 years). Madans said that she was unable to show any connection to income, because the data come from vital statistics and the administrative information does not include income. She also noted that no information is available on the life expectancy of the poor.

Madans presented a number of statistics from the National Vital Statistics System that show health differentials by educational attainment. Infant mortality rates by years of maternal education have been decreasing for mothers at all educational levels since 1984, but still remain higher for women with a high school degree or less compared to women with more education. Chronic disease death rates among adults 25–64 years old are also much higher for people with a high school degree or less compared to those with more education, and there has been a slight trend downward since 1994 for the more highly educated group. Communicable disease death rates among adults 25–64 years old are also much higher for those with a high school degree or less compared to those with more education. While the communicable disease death rates trended downward during 1994–1998, they have flattened out since that time.

NHANES, which provides a wealth of information on measured health indicators, indicates that some medical problems have gotten worse since the early 1970s. The incidence of hypertension among adults 20–74 years old is higher for the poor than for the nonpoor, especially among women, and while the percentage of people with this condition decreased between 1980–1988, it has been increasing since that time. However, the increase in hypertension since 1988 was smaller for poor women than for nonpoor women. The percent of overweight children (both 6–11 years old and 12–19 years old) has increased significantly since the early 1970s, with poor children being more likely to be overweight than nonpoor and near-poor children. (The poor are defined as those below 100 percent of the poverty line, and the near-poor are defined as those between 100 and 200 percent of poverty.) Obesity among adults 20–74 years old has increased since the early 1970s for both men and women, although the differences by income level are more pronounced for women than men—poor and near-poor women tend to be more obese than nonpoor women.

NHANES also shows some areas of significant improvement in health since the early 1970s, both for the general population and for the poor in particular. In general, the charts show a significant decline between 1971 and 2002 in elevated serum cholesterol levels for the poor. Hence, at this time, men and women below poverty have similar levels of elevated serum cholesterol as do those at higher incomes. The percentage of both children (6–17 years old) and adults (18–64 years old) with untreated dental caries has declined significantly since the early 1970s, and while the problem remains more serious for the poor than for the nonpoor, the poor made significant progress during 1971–2002. Finally, a major success story has been the reduction in elevated levels of lead in the blood of children 1–5 years old for both the poor and the nonpoor. From the mid-1970s to 2002 the percentage fell from upwards of 90 percent to a level too low to be detected by the survey for all income groups.

The NHIS, which is based on respondents' subjective assessment of their health condition, shows that indicators on activity limitations have been improving for the poor in recent years; however, some significant differences between the poor and nonpoor persist. Madans noted that the percentage of children 5–17 years old with an activity limitation is generally less than 10 percent overall, but is noticeably higher for poor children compared to nonpoor children. The largest differences by income level occur for adults 18–64 years old, where the percentage of those with an activity limitation is much higher for the poor (above 20 percent) compared to the nonpoor (less than 10 percent or so for those above 200 percent of the poverty level). The trends in this indicator show slightly increasing levels of activity limitation before 1997, and slightly decreasing levels thereafter. In particular, between 1997 and 2003, the percent of the poor in the 18–64 age group with an activity limitation declined from 26 to 23 percent. In contrast, between 1997 and 2003 the percentage of persons between 100–200 percent of poverty and 200 percent of poverty or above in the 18–64 age group with an activity limitation remained at about the same level (16 percent and 7 percent, respectively). Based on the NHIS, the percentage of persons who list themselves as in fair/poor health is much higher for the poor than the nonpoor.

Madans also presented data from the Medicare Current Beneficiary Survey for Medicare

beneficiaries sixty-five years old and over, showing that the percentage with an activities of daily living (ADL) limitation is much higher for the poor (generally over 25 percent) than for the nonpoor (generally below 10 percent for those above 200 percent of poverty).

Based on the NHIS, the percentage of younger and older persons below the poverty line and just above the poverty line without a health care visit declined significantly since 1990. For persons below the poverty level who were under eighteen years old, the percent without a health care visit declined between 1990 (23 percent) and 1996 (19 percent); this age group also had a decline between 1997 (14 percent) and 2003 (12 percent). Among persons below the poverty level who were sixty-five years old and over, the percent without a health care visit declined between 1990 (9 percent) and 1996 (7 percent); this group also had a slight decline between 1999 (5 percent) and 2003 (4 percent). For persons between 100–200 percent of the poverty level who were under eighteen years old, the percent without a health care visit declined between 1990 (22 percent) and 1996 (20 percent); this age group also had a slight decline between 1997 (14 percent) and 2003 (13 percent). Among persons between 100–200 percent of the poverty level who were sixty-five years old and over, the percent without a health care visit declined between 1990 (9 percent) and 1996 (7 percent); this group also had a decline between 1999 (6 percent) and 2003 (4 percent).

Seminar participants commented about the characterization of health indicators by poverty status. Besharov noted that while data were presented for people below 100 percent of poverty, 100 to 199 percent of poverty, and 200 percent of poverty or more, technically speaking, only those below 100 percent of poverty can be referred to as the poor. Madans responded that they refer to the group just above poverty as the "near poor." Robert Kominski suggested that it would be interesting to see a disaggregation of the data for those above 200 percent of the poverty level, to see if there has been differential improvement for higher income people and to highlight the differences in health status between the poor and people at much higher income levels. Madans mentioned that interest has often been primarily at the lower end of the income spectrum, and she was less worried about the income measure than the health measures. She said that it would also be interesting to examine the health indicators by the presence of health insurance coverage, and to measure the effect of Medicaid. It was also noted that there is a significant improvement in health in moving from being poor to nonpoor, and the improvements likely increase as income rises further, but probably not in a linear relationship.

In summarizing her presentation, Madans said that there have been improvements in health for everyone, except for an increase in obesity and in the number of people who are overweight. In particular, the health status of the poor, as measured by several indicators, has improved over the past few decades. And while there are generally worse health outcomes for the poor compared to the nonpoor, there are notable exceptions. For instance, poor men have similar elevated serum cholesterol levels as nonpoor men and comparable obesity levels. Madans said that there are five data issues to consider when interpreting the data she presented: (1) the surveys cover the civilian, non-institutionalized population; (2) there are insufficient numbers of reliable estimates for detailed subcategories; (3) income is difficult to collect in surveys; (4) responses to health

questions (particularly subjective health measures) are influenced by a person's income level; and (5) knowing when income matters for a person's health is important. On the last point, Madans said that cross-sectional measurement of income may underestimate the effect of income on health, and *income changes* over a lifetime may have a stronger impact on health than current *income level*.

In conclusion, Madans stressed the need for a poverty measure that can help explain the interrelationships between health, income, and other variables. She said that a valid poverty measure is needed that can be easily collected and compiled. Finally, she said that there should be increased reliance on data linkage to augment the results of surveys and research.

Group Discussion

O'Grady discussed the policy implications of Madans's presentation. He noted that there is an important intersection between health and income and poverty in terms of how it affects policy. Subsidies for health insurance go to the lowest income groups and the disabled first, and there is less emphasis on those with higher incomes. O'Grady noted that health indicators are germane to many research questions, and that more needs to be done to break down the walls between academic disciplines and promote the information more effectively in the media. He also emphasized that while many health disparities between groups are diminishing, an anchor point is needed as a goal to move toward. Most of the data presented were from household surveys, but much more can be done to fill in the gaps with administrative data. Concerning health disparities, they need to be shown by various demographic and socioeconomic groups, and poverty will be a key factor in this distinction. Rector noted that the health surveys are very concrete, and in combination with physical examinations and administrative data could shed light on many important social issues. O'Grady responded that we do not have to wait fifty years to accomplish the linkage with administrative data, because the technology is available now.

Besharov asked Eberstadt and Madans to comment on the concept that poverty is not the only thing we should examine to understand well-being. Eberstadt responded that when addressing deprivation, health issues are front and center. Madans added that health is a major factor to examine, but it is important to understand the multiple causal pathways that produce health. Income is a major factor, but it is important to add other factors to understand how health is promoted. Besharov emphasized that the analysis should not just stop at the poverty line because it is important to examine what happens for those above the poverty line; perhaps poverty is being asked to carry too much of the load for explanation. Madans said that the analysis should never have only a poverty-nonpoverty focus, because it is important to look at gradations in-between the two concepts and, in this regard, she prefers multiples of the poverty line to straight income cutoffs.

Wade Horn asked Madans if similar disparities exist when health outcomes are tabulated by family structure. Madans noted that the NHIS and NHANES contain data on family structure, and the tabulations become unwieldy when additional detail is incorporated, but some of the same

differences would remain. O'Grady noted that family structure and categorical eligibility can be important determinants of who gets what in the way of health benefits. Since subsidies are provided depending on income, the poor tend to get Medicaid while the near-poor may not. Also, single individuals with low-income may not be eligible for health benefits, while families with children having similar income may be eligible.

Several more comments from seminar participants rounded out the discussion on health outcomes. Dan Weinberg urged participants to think of health outcomes in terms of income per equivalent adult, and not whether they are in or out of poverty. Arthur Kirsch cautioned that one needs to be careful when using subjective measures because they can be quite variable. And Rector, referring to the chart on health visits by children under eighteen years old, reminded everyone that while poor children do less well on this score than nonpoor children, they are probably doing as well as nonpoor children twenty years ago. In other words, there has been improvement that is not revealed by the poverty data.

Kurt Bauman's Presentation

Bauman mentioned that his presentation on trends in material well-being in the 1990s is a work in progress, and is a selection from a report that the Census Bureau is working on concerning the subject. He said that his presentation would focus on describing the indicators of material well-being, how they changed from 1992 to 1998, how they relate to the official measure of poverty, and their limitations and possible uses.

The extended measures of well-being are derived from the Survey of Income and Program Participation (SIPP), which is a panel survey that follows households for three to four years. The measures of material well-being for 1992 to 1998 were derived from two separate SIPP panels, comprising two cross-sectional estimates. The extended measures of adult well-being include: consumer durables, housing conditions, fear of crime, neighborhood conditions, meeting basic needs, and food security.

Bauman noted that for all households, between 1992 and 1998 there were small increases in material well-being for measures of well-being that already had a high incidence in the general population, such as ownership of a telephone, having enough of food wanted, no unmet need for a doctor, no roof or ceiling leaks, and no abandoned buildings in the neighborhood. There were larger increases between 1992 and 1998 for measures that had a lower incidence of ownership in the population, such as a computer (from 21 to 42 percent) and an air conditioner (from 69 to 78 percent). In 1998, the nonpoor had a higher incidence of meeting these needs than the poor, and the discrepancies were greatest for items that were less common in the population, such as a computer (18 percent of the poor compared to 45 percent of the nonpoor) and an air conditioner (68 percent of the poor and 79 percent of the nonpoor).

Using charts showing the ownership of computers for the nonpoor and poor, Bauman presented data on changes between 1992 and 1998:

	Households not in Poverty			Households in Poverty		
	1992	1998	Difference	1992	1998	Difference
Percent Computer	22.6	45.3	22.7	7.1	18.4	11.4
Percent No Computer	77.4	54.7	-22.7	92.9	81.6	-11.4
Total	100.0	100.0	(NA)	100.0	100.0	(NA)

NA – Not applicable

From these data, Bauman concluded that one can arrive at different interpretations of changes over time depending upon the numbers selected. For example, looking at the percentage point change in households with computers, one might conclude that households in poverty (11.4 percent) are falling behind households not in poverty (22.7 percent). On the other hand, looking at growth as a ratio, one might conclude that households in poverty (18.4/7.1 = 2.6) were gaining on households not in poverty (45.3/22.6 = 2.0).

As an alternative way to present the data, Bauman suggested that one could compare the odds that a household not in poverty has a computer compared with the odds that a household in poverty has one. For 1992, the odds for households not in poverty (22.6/77.4 = .29) is higher than the odds for households in poverty (7.1/92.9 = .08), and the ratio of the two odds can be calculated (.29/.08 = 3.9). A similar calculation for 1998 yields an odds ratio of 3.7. Bauman's conclusion from these data is that between 1992 and 1998, households in poverty kept up with households not in poverty, since the odds ratios in the two years (3.9 and 3.7) are not significantly different from each other.

Bauman subsequently presented data on the percent of all households with each material well-being measure in 1992 and 1998, and concluded that there were statistically significant changes (p<.10) for computers, dishwashers, air conditioners, telephones, no unpaid rent or mortgage, no roof or ceiling leaks, no abandoned houses in the neighborhood, and no smoke or odors in the neighborhood. However, there were no statistically significant changes in the odds ratios between the nonpoor and poor between 1992 and 1998, which implies that the poor kept up with the nonpoor over this time period.

In discussing the limitations of this approach, Bauman noted that there is no overall summary of material well-being, no agreed upon "thresholds," and the measures do not account for people's voluntary choices. However, possible uses of the information include a description of additional dimensions of well-being, illuminating relationships with other processes, and identifying populations that may be of interest to policy makers and other groups (Bauman used the example of identifying the possession of consumer durables by households with disabled adults).

In his summary, Bauman's major conclusions were that: (1) For all households, twenty-eight of thirty-nine of these material well-being measures were more common in 1998 than in 1992; (2) For households in poverty, the odds of having these material well-being measures were unchanged between 1992 and 1998; and (3) Material well-being measures provide information on the material conditions of population groups.

Reischauer noted that there are problems in interpreting odds ratios when the proportion of the population that meets a certain condition is extremely high. He also stressed the importance of examining other dimensions that are important, such as the quantity and quality of the measure being considered.

Arthur Kirsch's Comments

Kirsch stressed that when presenting statistics, it is important to present simple, easy-to-understand information before moving on to more complex concepts. He also said that it is important to make the distinction between a change being statistically significant and analytically significant. If the sample size gets large enough, the difference between two proportions will be statistically significant, even if the difference is small. A change needs to be statistically significant before we can talk about it, but we may not want to talk about all statistically significant changes because they may be too small to be analytically significant.

Kirsch had a problem with the use of odds ratios to explain trends in material well-being because he said they were difficult to interpret. He said the problems were particularly severe when the percentages being compared are extremely high and the differences are small. As an example, he used Bauman's data on the ownership of a stove, which for the total population in 1992 was 98.9 percent and in 1998 was 98.7 percent, a difference of only -0.2 percentage points. The odds ratio of owning a stove for the nonpoor compared to the poor in 1992 was 3.9 percent compared to a 1998 ratio of 3.2 percent. Kirsch said that it was difficult to interpret the odds ratio—it is a number different than one, but it is hard to say what it means. He said that most people can understand differences in percentages and differences in odds, but unless the audience is very sophisticated it may have difficulty interpreting odds ratios, and they may be misquoted by the media.

Kirsch offered some advice that he said he often gave to students working on their Ph.D. dissertations when he was Chairman of the Statistics Department at George Washington

University. Do the simple things first, show the basic tables, and only then move on to more complex calculations. Always show the number of sample cases that the calculations are based on (although in the calculation of odds ratios this can be difficult to do).

Group Discussion

Several seminar participants responded to Bauman's presentation and Kirsch's comments. Kathleen Cooper commended Bauman and the Census Bureau for advancing new work on extended measures of material well-being. She said that although changes in the odds ratios did not turn out to be statistically significant, the percentage changes for a number of the measures of material well-being show improvement for both poor and nonpoor households. Nancy Gordon noted that the Census Bureau was concerned about misleading interpretations of the data, as Bauman noted in his presentation, and encouraged seminar participants to suggest other methods for presenting the information that accurately reveals the trends. Robert Kominski added that while the likelihood of changes between the poor and nonpoor were not statistically significant, this should be interpreted as the poor keeping up with the nonpoor over the period examined. Madans added that in comparisons such as these, the results are different depending upon whether relative or absolute measures are used, and it is important to report several statistics so readers will understand what is happening. Weinberg noted that SIPP has a number of indicators that will support much additional research on this subject. Besharov summarized the discussion by saying that there was no change in the odds ratios over the period examined, but emphasized that large odds ratios are difficult to interpret.

Rector said that it would be desirable to ask the American public directly if they think the standard of living has changed, and whether poor people are better off now than in the past. He said that on every indicator examined, there seems to be a lag of two to three decades before the poor reach the same level as the rest of the population. Reischauer agreed that the poor are better off today than they were in the past, but we really do not know what the public knows about these developments. He said that the real issue is whether it translates into a policy recommendation. Rector said that the frustration is that while progress has occurred, it does not get included in the story that gets reported. Robert Greenstein added that while the poor as a group are better off than twenty years ago, there are still problems at the bottom of the income distribution, as evidenced by the number of homeless people.

O'Grady reminded seminar participants of the example presented in an earlier meeting by Timothy Smeeding concerning the use of relative poverty measures in Ireland, which showed a worsening condition in the country even though it was experiencing record economic growth. He said that this goes to the heart of the issue on how we think about things, and how these measures will be used.

Concluding Remarks

Besharov said that the seminar had revealed several important findings: (1) a wealth of data on well-being exists; (2) not all of the indicators are tied to income; (3) attaching income data might or might not be possible; (4) available data suggest that most of the elements of well-being are not necessarily influenced by poverty status; (5) the indicators, even those related to income, tell a mixed story; (6) some indicators are much more important than others; and (7) the standard approach in such circumstances would be to create an index, but that would be subjective.

Besharov said that the seminar had reinforced his view that different poverty measures should be used to address different questions. He stressed the importance of looking at pre-tax, pre-transfer income measures, and post-tax post-transfer income measures, which will help to clarify differences in well-being. Finally, he reminded participants that the next seminar will be held on April 26th (or later), in which a special tabulation being prepared by the Census Bureau will shed some empirical light on many of the issues that have been discussed in past seminars: alternative definitions of income, more accurate measures of inflation, an improved equivalence scale, and the use of household income rather than family income to measure poverty.