Edward Jenner and Smallpox

While Jenner's interest in the protective effects of cowpox began during his apprenticeship with George Harwicke, it was 1796 before he made the first step in the long process whereby smallpox, the scourge of mankind, would be totally eradicated. For many years, he had heard the tales that dairymaids were protected from smallpox naturally after having suffered from cowpox. Pondering this, Jenner concluded that cowpox not only protected against smallpox but also could be transmitted from one person to another as a deliberate mechanism of protection. In May 1796, Edward Jenner found a young dairymaid, Sarah Nelms, who had fresh cowpox lesions on her hands and arms On May 14, 1796, using matter from Nelms' lesions, he inoculated an 8-year-old boy, James Phipps. Subsequently, the boy developed mild fever and discomfort in the axillae. Nine days after the procedure he felt cold and had lost his appetite, but on the next day he was much better. In July 1796, Jenner inoculated the boy again, this time with matter from a fresh smallpox lesion. No disease developed, and Jenner concluded that protection was complete.

(accessed on 1.16.15 at http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1200696/)

Education Gap Grows Between Rich and Poor, Studies Say By SABRINA TAVERNISE

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WASHINGTON — Education was historically considered a great equalizer in American society, capable of lifting less advantaged children and improving their chances for success as adults. But a body of recently published scholarship suggests that the achievement gap between rich and poor children is widening, a development that threatens to dilute education's leveling effects.

It is a well-known fact that children from affluent families tend to do better in school. Yet the income divide has received far less attention from policy makers and government officials than gaps in student accomplishment by race.
Now, in analyses of long-term data published in recent months, researchers are finding that while the achievement gap between white and black students has narrowed significantly over the past few decades, the gap between rich and poor students has grown substantially during the same period.
"We have moved from a society in the 1950s and 1960s, in which race was more consequential than family income, to one today in which family income appears more determinative of educational success than race," said Sean F. Reardon, a Stanford University sociologist. Professor Reardon is the author of a study that found that the gap in standardized test scores between affluent and low-income students had grown by about 40 percent since the 1960s, and is now double the testing gap between blacks and whites.
In another study, by researchers from the University of Michigan, the imbalance between rich and poor children in college completion — the single most important predictor of success in the work force — has grown by about 50 percent since the late 1980s.
The changes are tectonic, a result of social and economic processes unfolding over many decades. The data from most of these studies end in 2007 and 2008, before the recession's full impact was felt. Researchers said that based on experiences during past recessions, the recent downturn was likely to have aggravated the trend.
"With income declines more severe in the lower brackets, there's a good chance the recession may have widened the gap," Professor Reardon said. In the study he led, researchers analyzed 12 sets of standardized test scores starting in 1960 and ending in 2007. He compared children from families in the 90th percentile of income — the equivalent of around $160,000 in 2008, when the study was conducted — and children from the 10th percentile, $17,500 in 2008. By the end of that period, the achievement gap by income had grown by 40 percent, he said, while the gap between white and black students, regardless of income, had shrunk substantially.
Both studies were first published last fall in a book of research, "Whither Opportunity?" compiled by the Russell Sage Foundation, a research center for social sciences, and the Spencer Foundation, which focuses on education.
(accessed on 1.5.14 at http://www.nytimes.com/2012/02/10/education/education-gap-grows-between-rich-and-poor-studies-show.html?pagewanted=all)

Lifelong poverty increases heart disease risks
Fri, Mar 27 2009
By Amy Norton

NEW YORK (Reuters Health) - The longer a person remains in poverty, the more likely he or she is to develop heart disease, a new study suggests.

Studies in developed countries have consistently shown that people with low incomes and less education generally have higher rates of heart disease than their more-educated, higher-income counterparts.

In this latest study, published in the American Journal of Epidemiology, researchers found that lifelong disadvantage may translate into an "accumulation of risk" for heart disease.

They found that among more than 1,800 U.S. adults in a long-term heart- health study, greater lifetime exposure to poverty was related to increasing heart disease risks. Those who were disadvantaged as children and adults were 82 percent more likely to develop heart disease than those who were comparatively well off in childhood and adulthood.

Much of the disparity seemed to be explained by higher rates of "classic" heart disease risk factors, said lead researcher Dr. Eric B. Loucks, who was at McGill University in Montreal, Canada, at the time of the study.

People who were disadvantaged throughout life were, for example, more likely to smoke or be obese, explained Loucks, who is now an assistant professor at Brown University in Providence, Rhode Island.

The study included 1,835 men and women who were followed between 1971 and 2003. During that time, 144 developed heart-artery blockages, suffered a heart attack or died from heart disease.

The researchers gave each participant a "score" for lifelong socioeconomic status -- using fathers' education as an indicator of childhood status, and participants' own education and job as a measure of adulthood status.

Overall, the researchers found, men and women with the greatest lifelong exposure to poverty faced the greatest heart risks.

The findings, according to Loucks and his colleagues, underscore the potential importance of heart-disease prevention and treatment in people who have faced lifelong disadvantage.

That could take two types of approaches, Loucks told Reuters Health. Improving educational and economic opportunities for Americans, he said, could eventually improve their heart health -- not only for adults today, but for future generations if parents' education does in fact influence their children's long-term heart risks.

In addition, Loucks noted, health professionals could do more as far as lifestyle advice and treatment of heart disease risk factors in lower-income patients.

SOURCE: American Journal of Epidemiology, April 1, 2009.

(Accessed on 1.5.13 at http://www.reuters.com/article/2009/03/27/us-lifelong-poverty-idUSTRE52Q3S520090327)

The 1936 *Literary Digest* Poll
The presidential election of 1936 pitted Alfred Landon, the Republican governor of Kansas, against the incumbent President, Franklin D. Roosevelt. The year 1936 marked the end of the Great Depression, and economic issues such as unemployment and government spending were the dominant themes of the campaign. The *Literary Digest* was one of the most respected magazines of the time and had a history of accurately predicting the winners of presidential elections that dated back to 1916. For the 1936 election, the *Literary Digest* prediction was that Landon would get 57% of the vote against Roosevelt's 43% (these are the *statistics* that the poll measured). . . .

The *Literary Digest*'s method for choosing its sample was as follows: Based on every telephone directory in the United States, lists of magazine subscribers, rosters of clubs and associations, and other sources, a mailing list of about 10 million names was created. Every name on this lest was mailed a mock ballot and asked to return the marked ballot to the magazine.

The actual results of the election were 62% for Roosevelt against 38% for Landon

(Accessed on 1.22.16 at https://www.math.upenn.edu/~deturck/m170/wk4/lecture/case1.html)