THE HISTORY OF VULNERABILITY IN THE UNITED STATES

Background for Scenarios of the Future of Vulnerability

Contents

Introduction .................................................................................................................................................. 1
Poverty and Vulnerability ........................................................................................................................ 1
   Industrialization, Economy and Employment .................................................................................. 2
   The Progressive Era ......................................................................................................................... 3
   The Great Depression and the New Deal ....................................................................................... 3
   World War II and the Postwar Boom ............................................................................................... 4
Achievements in Public Health ............................................................................................................. 5
The War on Poverty .................................................................................................................................. 6
Vulnerable Populations Left Behind ...................................................................................................... 8
Housing and Neighborhoods ................................................................................................................ 11
Education ............................................................................................................................................... 14
Role of Government ............................................................................................................................ 16
Environment and Resources ................................................................................................................. 18
Food and Diet .......................................................................................................................................... 21
Criminality and Corrections .................................................................................................................. 22
Technology ............................................................................................................................................. 24
Cultural, Social and Generational Change ......................................................................................... 26
Conclusion ............................................................................................................................................. 28
THE HISTORY OF VULNERABILITY IN THE UNITED STATES

Background for Scenarios of the Future of Vulnerability

Introduction

Daniel Boorstin, the former Librarian of Congress, has said that trying to plan for the future without a sense of the past is like trying to plant cut flowers.\(^1\) In that spirit, the Institute for Alternative Futures (IAF) has been reviewing the history of vulnerable populations at the same time that it has been developing alternative forecasts for the future of vulnerable populations.

This historical background has two parts. The first part is organized chronologically and reviews the history of vulnerability from the beginning of the 20th century to the late 1970s and early 1980s when the drive to win a “War on Poverty” faltered on surging oil prices, recession and ideological change.

The second part deals primarily, but not exclusively, with the period from the early 1980s to the present. It is organized topically rather than chronologically and focuses on areas of change we believe will be especially important “driving forces” determining the future circumstances of vulnerable populations. Looking at how those areas have evolved in recent decades provides a basis for assessing how they might continue to evolve between now and 2030.

Poverty and Vulnerability

Many kinds of circumstances make people vulnerable to poor health, from inadequate housing and education to violence or exposure to toxic chemicals. But the single strongest predictor of poor health, early mortality and disability is poverty.

This relationship between poverty and vulnerability to health problems has been clearly documented. At the 20\(^{th}\) century’s start, epidemics of typhus, yellow fever, cholera and other diseases swept through tenements and urban slums with fearsome impact. At the same time, many white as well as black farmers in the rural South had still not fully recovered economically from the Civil War and their poor diets made them vulnerable to diseases such as hookworm and pellagra.\(^2\) A century later, researchers were demonstrating the strong relationship between poverty and a wide range of current health


\(^2\) Foner, Eric. 1990. A Short History of Reconstruction. New York: Harper & Row. Foner presents evidence that cotton production did not return to pre-war levels until early in the 20th century and that a majority of southerners were poorer for decades after the Civil War.
problems, including infant mortality, cardiovascular and heart disease, cancer, diabetes, arthritis, and AIDS.³

Different researchers stress different reasons why poverty and vulnerability are so closely correlated, but the correlation is probably the combined result of multiple factors such as material hardship, poor nutrition, stress and lack of access to health care.

PART 1: FROM THE START OF THE 20TH CENTURY TO THE EARLY 1980s

Industrialization, Economy and Employment

The shift from craft production in small shops and mills to large-scale industrial production in factories was a major factor setting the context of poverty and vulnerability at the start of the 20th century. Industrialization progressed rapidly in the United States in the decades after the Civil War. During the period running from the 1870s to 1900 that Mark Twain and Charles Dudley Warner christened the Gilded Age, progress in science began to interact with technological development, accelerating the pace of industrialization still further and making great fortunes for the founders and leaders of large industrial enterprises. Real wages rose impressively for some of those employed in industry, yet by the start of the 20th century, industrialization and the policies supporting it had also created large new vulnerable populations.

To meet the need for more industrial workers, business leaders favored and obtained virtually unlimited immigration. The United States had essentially open borders until the 1920s, producing a large surplus pool of unskilled labor living in unsanitary urban slums and willing to work for subsistence level wages.

At the same time, industrialization was transforming agriculture and rural life. In 1900, 41 percent of the U.S. workforce was employed directly in agriculture. By 1930, mechanization had cut the agricultural workforce nearly in half. Farm output increased, but large numbers of previously self-reliant farmers lost their farms and livelihoods.⁴

Other population subgroups were impoverished by discrimination and unjust treatment. Racism and violence in the South sharply limited economic opportunities for African Americans, who fled in large numbers to the North, Midwest and West from 1910 to 1930 in what came to be called The Great Migration. Western Native Americans were herded on to reservations where they were expected to take up farming – totally alien to their culture – without adequate fertile land, seed, machinery, or training.⁵


The Progressive Era

High unemployment, dangerous factory environments, worsening conditions in expanding urban slums, the increasing frequency and violence of clashes between workers and capital, and the rise of giant monopolies led to a number of reforms in the period from roughly 1900 to 1914 that came to be called the Progressive Era. Workmen’s compensation programs for injured workers and relief programs for widowed mothers were created at the state and local level. Major nongovernmental innovations such as settlement houses and the National Urban League arose to address problems of poverty and urban life. Child labor laws were enacted. The incarceration of young people with adults inspired a movement to create a separate juvenile justice system.6

These and other initial experiments in social welfare were slowed or stalled by World War I, but a profound shift had begun in the way many Americans thought about poverty and vulnerable populations. Traditional views of “pauperism,” as it was often called, emphasized individual failure as the cause and private charity as the solution. During the Progressive Era, many Americans began to view poverty as a by-product of social and economic processes and accept the idea that public social welfare should help mitigate the conditions of life in rapidly growing, increasingly immigrant industrial cities. This shift in perspective laid the groundwork for the social welfare programs of the New Deal.

The greatest shortcoming of the Progressive Era was arguably its failure to deal with the Jim Crow racial caste system in the Southern and border states. That failure set the stage for severe problems of poverty and vulnerability later in the century.

The Great Depression and the New Deal

The Wall Street crash of October 1929 and the even more serious market declines of the next several months wiped out three-quarters of the stock market’s worth. Without adequate government spending to inhibit a downward spiral, rapid economic and social disintegration discredited President Herbert Hoover’s assurances that recovery was just around the corner and led to the election of Franklin D. Roosevelt. By this time, the poverty that previously afflicted over a third of the nation in urban slums and on farms had become a mass phenomenon.

The study of the Great Depression is still revealing facets of the complex relationship between poverty and vulnerability to poor health. On the one hand, there is clear evidence that that during the Depression inadequate diets and other conditions led to more cases of dysentery, pellagra, tuberculosis and a variety of chronic illnesses. On the other hand, a recent, controversial analysis of government data from that time suggests that during the worst years of the Depression, from 1930 to 1933, mortality actually decreased for almost all ages and life expectancy increased by several years in males, females, whites, and non-whites. The analysis suggests that the same thing may have happened in other periods where the whole society experienced hard times (as opposed to individual or localized poverty). Researchers have suggested that during periods of widespread hard times the pace of life slows down, there is less work to do and people work more slowly, sleep longer, and spend much more

time with family and friends. With less money, they are likely to spend less on alcohol and tobacco, walk more, and eat less and more carefully.7

As serious as the recent Great Recession has been, its consequences pale compared to the Great Depression. Foreclosures on farms numbered in the hundreds of thousands and millions of families defaulted on their mortgages. Homelessness soared and shantytowns nicknamed “Hoovervilles” skirted the perimeters of cities. Many of those fortunate enough to have shelter could not afford to purchase fuel to heat their homes in winter. Starving children picked over garbage. By 1933 overall unemployment reached 25 percent. Unemployment for African Americans and other racial minorities was double that or worse. Declining tax revenues and rising calls for public assistance bankrupted state and local governments. Over two million people joined demonstrations and marches for relief and jobs.

Roosevelt came into office at the nadir of the Depression, just as over 5,000 banks were collapsing, causing millions of people to lose their savings. He immediately declared a “bank holiday” and persuaded Congress to pass the Glass-Steagall Banking Act of 1933 establishing the Federal Deposit Insurance Corporation to ensure individual savings. Many of the policies enacted over the decade ahead were attempts to stabilize the banking system and manufacturing industries, raise production and help the private sector create jobs. But the policies most closely associated with Roosevelt’s “New Deal” involved the federal government taking greater responsibility for preventing poverty and protecting vulnerable populations.

By 1936 a new Federal Emergency Relief Administration had distributed roughly $1 billion a year for direct relief. The overwhelming majority of aid, however, was provided in the form of cash-for-labor programs such as a short-lived Civil Works Administration (CWA), the Civilian Conservation Corps (CCC), the Work Projects Administration (WPA) and the Federal Art Project. Other programs like Unemployment Insurance (UI) and Aid to Dependent Children (ADC) aimed to help those unable to work.

The New Deal program with the most lasting impact on poverty and vulnerability was the Social Security Act of 1935. While its initial coverage was limited, over the decades ahead it did more than anything else to reduce poverty and vulnerability among the nation’s elderly population.

The “Roosevelt Recession” in 1937 made it clear that the New Deal had failed to end the Great Depression. But it had stopped the economy’s free fall, improved living conditions, and made poverty and vulnerability a legitimate sphere for national action.

World War II and the Postwar Boom

World War II marked a turning point. The 1940 census still portrayed a society with high unemployment, low wages and widespread poverty. But the massive deficit spending of World War II finally pulled the country out of the Depression. Within just a few years, as the U.S. fully engaged in the

Many people feared that the end of the war and the subsequent drop in military spending might bring back the hard times of the Great Depression. Instead economic growth continued and accelerated over time, powered, in part, by pent-up consumer demand and the post-war “baby boom” that increased the number of consumers. A housing boom stimulated by easily affordable mortgages for returning members of the military added to the expansion.

Of equal importance, the U.S. had the capability to meet this growing demand. It emerged from the war as one of the few physically undamaged developed nations. Its manufacturing capability expanded during the war while other major nations lost much of their capability. U.S. exports and material assistance were critical for the recovery of other nations. The auto industry, bolstered by the war’s demand for military vehicles, successfully converted back to cars and produced them at a record pace. New technologies developed in the war effort – jet aircraft and radar, digital electronics, new synthetic materials – became the basis for whole new industries. Other technologies like television, originally developed in the years before the war, were now ready for commercialization. Systematic research and development and total quality management, methods that were refined during wartime, were now applied to industry.

The resulting economic boom continued throughout the 1950s and 1960s, expanding workforce participation, creating a large new middle class and dramatically reducing poverty. Among all households, poverty declined from an estimated 44 percent in 1939 to 22 percent in 1960.\(^8\) In the history of vulnerable populations, this dramatic decline in poverty associated with the postwar boom and ongoing economic growth is one of the major stories.

**Achievements in Public Health**

Progress in public health has been another major story in the reduction of populations vulnerable to poor health. Deaths from infectious diseases declined markedly during the twentieth century as a result of improvements in sanitation and hygiene, the use of antibiotics, the implementation of universal childhood vaccination programs, and improvements in technologies for detecting, diagnosing, and monitoring infectious diseases.

Basic sanitation to prevent human contact with the hazards of wastes tends to be taken for granted today and we forget how much progress was made over the course of a century. The transition from horses to cars provides a dramatic example. In 1880 scavengers removed an estimated 15,000 horse carcasses from the streets of New York City and visitors described the city as “a nasal disaster, where some streets smell like bad eggs dissolved in ammonia.” In 1900 there were still over 3 million horses working in U.S. cities, each producing over 20 pounds of manure and gallons of urine every day, most of

---

which was left in the streets.\textsuperscript{9} Wastewater collection and treatment, solid waste collection and disposal, sanitation in the food industry and animal and pest control have dramatically reduced the incidence of a wide range of infectious diseases including cholera, dysentery, TB, typhoid fever, and influenza. Fluoridation of community drinking water is a major factor responsible for the decline in tooth decay during the second half of the century.\textsuperscript{10}

Vaccination campaigns have nearly eliminated diseases that were common at the start of the century, including diphtheria, tetanus, poliomyelitis, smallpox, mumps, rubella and \textit{Haemophilus influenzae} type b meningitis. In 1949, state and local health departments instituted the first large-scale vaccination programs, aimed primarily at poor children. The federal government began funding state and local childhood vaccination programs in 1955, after the introduction of the Salk poliovirus vaccine. The Vaccination Assistance Act, landmark legislation passed in 1962 and renewed continuously, established a federally funded program to support the purchase and administration of a full range of childhood vaccines.\textsuperscript{11}

Discovered fortuitously in 1928, penicillin was not developed for medical use until World War II. Since then, penicillin and other antibiotics have revolutionized the treatment of streptococcal and staphylococcal infections, gonorrhea, syphilis, and other infections, saving millions of lives.\textsuperscript{12}

These developments, especially the spread of vaccination programs, inspired the late 20\textsuperscript{th} century concept of “disease eradication” – the idea that selected diseases could be eliminated from all human populations by global cooperation, a leap of progress that was unimaginable at the start of the century.

\textbf{The War on Poverty}

When President John F. Kennedy took office in 1960, the national poverty rate was 22 percent, lower than at any previous time in the century. But Kennedy and members of his Administration came to feel that the persistence of so much poverty amid post-World War II affluence was unjust and unacceptable. They were influenced by the moral groundswell of the Civil Rights movement, which highlighted the role of racial discrimination in perpetuating poverty, as well as the rediscovery of poverty by journalists and social reformers. Kennedy was moved, in particular, by Dwight McDonald’s extensive \textit{New Yorker} review of Michael Harrington’s 1962 book \textit{The Other America}. Harrington’s book was a vivid and

\begin{footnotesize}


\end{footnotesize}
disturbing description of a separate, forgotten America of fifty million poor citizens, many of them suffering both physically and psychologically, who had become nearly invisible to the America of television and suburban prosperity. Kennedy initiated modest efforts including an experimental Food Stamp program, the Manpower Development and Training Act, and a President’s Committee on Juvenile Delinquency and Youth Crime (PCJD) that had little impact during his lifetime but helped shape President Lyndon Johnson’s War on Poverty.

After only a month in office, President Johnson decided to greatly enlarge the antipoverty effort. Two weeks later he used the famous War on Poverty metaphor in his 1964 State of the Union address. The War on Poverty had three different fronts, all based on the idea of improving economic opportunity rather than providing cash transfers or New Deal-style jobs programs. The first front involved stimulating the economy and creating more jobs. A massive tax cut, first promoted by President Kennedy, passed Congress in early 1964 and contributed to an extraordinary economic expansion.

The second front involved creating a set of programs designed to help people develop marketable job skills and the abilities needed to become active participants in the civic life of their communities. The Economic Opportunity Act of 1964 provided the basis for the Office of Economic Opportunity (OEO), the Job Corps, Volunteers in Service to America (VISTA), Upward Bound, Head Start, Legal Services, the Neighborhood Youth Corps, the Community Action Program (CAP), the college Work-Study program, Neighborhood Development Centers, small business loan programs, rural programs, migrant worker programs, remedial education projects, and others. Protecting the health of vulnerable populations was an explicit if small part of this effort. The OEO supported the development of local health care centers. Other programs, especially Head Start, attended to dietary and other health-related needs of the populations they served.

These programs are what people usually associate with the War on Poverty, but a third front of Great Society programs outside the framework of the Economic Opportunity Act accounted for far larger expenditures and had more lasting impacts on vulnerable populations and the lives of all Americans. In 1965 the Medicare and Medicaid Bill was signed into law, subsidizing health care for the elderly and qualified people with low incomes. The introduction of Supplemental Security Income and the further expansion of Social Security finally helped minority as well as white families raise their income. The Food Stamp program eventually reached almost ten percent of the population and 60 percent of the poor. The Fair Housing Act addressed housing discrimination. The Elementary and Secondary Education Act funded local school districts to help their poor students. The Civil Rights Act outlawed racial segregation in schools, workplaces, and facilities that serve the general public, and the Voting Rights Act banned the discriminatory voting practices responsible for the widespread disenfranchisement of African Americans.

This combination of strategies – introducing reforms in job creation, education, health, housing, civil rights, civic participation and other areas – was the largest effort ever attempted by the federal government, before or since, to address the full range of needs of the nation’s most vulnerable populations. Between 1960 and 1973 the overall U.S. poverty rate fell from 22 percent to 12 percent, the number of people in poverty fell from 40 million to 24 million, and the black poverty rate declined dramatically from 55 percent to 33 percent. Defenders of the War on Poverty argue that Great Society programs were critical for achieving this progress.

Conservative critics, however, argued that economic growth alone was responsible for reducing poverty during this period. They charged that many of the hastily planned programs in the War on Poverty were
rife with corruption and inefficiency, and characterized the whole anti-poverty enterprise as a mismanaged attempt at social engineering that ended up reducing incentives to work, promoting dependency, and creating inefficient, bulging bureaucracies.

As this viewpoint came to the fore during the Presidency of Ronald Reagan, some of the Great Society programs were ended and many were cut back. Growing anger at paying taxes to support what many people felt were the “nonworking” and “undeserving” poor led to President Clinton’s vow to “end welfare as we know it” and the Welfare Reform Act of 1996.

Whatever shortcomings the War on Poverty’s programs may have had, they were not enough to end most of them. The largest health-related initiatives, Medicare and Medicaid, have become essential parts of the nation’s health care system. Because of Medicare and the expansion of Social Security, the poverty rate among the elderly has been transformed from the highest to the lowest for any age group. Much of the antipoverty institutional framework developed in the 1960s and early 1970s has weathered conservative attacks and remained in place through the 1980s and on to this day.

What was lost is the spirit that animated the original effort, the deep conviction that continuing poverty amid widespread affluence is not a normal condition but rather a national disgrace, and a strong commitment to deal with the problem. While the economy and jobs are topmost public concerns today, helping the poor ranks 9th among the U.S. public’s top 10 political priorities.13

Vulnerable Populations Left Behind

Even the most positive assessments of the War on Poverty acknowledge that it failed to achieve its ambitious goal of ending poverty. Great Society programs benefited the easier-to-reach poor and the middle class more than they benefited hard-core vulnerable populations. Then, starting with the stagflation caused by the OPEC oil embargo in 1973, economic growth became less effective in lifting people out of poverty. The poverty rate never went lower than it had reached in 1973, hovering between 12 and 15 percent for the rest of the century.

By the early 1980s it was clear that several specific populations remained locked into poverty despite economic growth and anti-poverty efforts and therefore were especially vulnerable to serious health problems. In particular, the War on Poverty failed to retard the worsening economic isolation of inner city ghettos, and unemployment rates for black men remained more than double those for whites. Other vulnerable populations left behind include poor people who are:

- High-risk mothers and infants
- Chronically malnourished
- Homeless
- Chronically ill or disabled
- Living with HIV/AIDS (including pediatric AIDS cases)

---

• Dealing with alcohol and drug abuse (including fetal alcohol syndrome and crack babies)
• Having health problems caused by chemical exposures
• Mentally ill
• Veterans suffering from PTSD
• In abusive families and relationships
• Gays and lesbians suffering from discrimination
• Foster youth aging out of the foster care system
• Prisoners being released from incarceration
• Native Americans

Despite some areas of progress, all of these population groups continue to define much of the challenge of vulnerability that our nation faces today.

PART 2: KEY AREAS OF CHANGE - 1980s TO 2010

Developments in recent decades merit a closer examination as a basis for looking ahead. For that closer look, we focus on developments in the areas of change that we have chosen as “key forces” to address in constructing alternative scenarios for 2030. Given the complexity of social dynamics, there are undoubtedly other areas of change that will prove important and could have been selected for review. However, a look at these areas provides a reasonably comprehensive picture of recent patterns of change setting the stage for future developments.

• Economy and Jobs
• Housing and Neighborhoods
• Education
• Role of Government
• Environment and Resources
• Food and Diet
• Criminality and Corrections
• Technology
• Cultural, Social and Generational Change
• Economy and Jobs

Aside from recessions at the start of the 1980s and 2000s and the recent Great Recession, the US economy has grown steadily over the past 30 years. However, these recent decades have been difficult ones for vulnerable populations because the benefits of growth have not been distributed equally. Income inequality decreased during the period from the 1940s to the early 1970s, but it has increased ever since – rapidly in the 1980s, less so in the 1990s, and rapidly again in the 2000s. While income growth was high among the top 10 percent, and soared among the top 1 percent, incomes have grown only slowly for the middle class and actually declined slightly among the most disadvantaged groups.\footnote{14 Yellen, Janet L. 2006. "Economic Inequality in the United States". Speech to the Center for the Study of Democracy at the University of California, Irvine. Published online by the Federal Reserve Bank of San Francisco. http://www.frbsf.org/news/speeches/2006/1106.html.}
Several factors have contributed to increasing income inequality. Some are the result of public policy, such as tax cuts for the wealthy and a falling real minimum wage. Tax rates for the wealthy are lower now than they were during the Reagan Administration and significantly lower than in any other developed nation.

Other factors are the result of major changes in circumstances. For example, the shift toward a post-industrial economy has created a situation in which more education equates with higher earnings, and the payoff is most notable at the highest educational levels. On average, a college degree is worth $1 million more in lifetime earnings than a high school diploma, according to a recent report from the U.S. Census Bureau. A Masters degree is worth nearly a half-million dollars more, and people with professional degrees make over $3 million more than high school graduates.\(^\text{15}\)

Another major factor is that over the past three decades computers have changed the nature of work and thus the mix of skills that workers need to have. People who have learned to use these technologies effectively have gained a large advantage in the job market over those who have not.

The importance of this “skill-based technological change” has been heightened by globalization. Globalization has made both imports and exports a larger part of the economy. Since the U.S. tends to export goods produced by highly skilled labor and to import goods made with less-skilled labor, globalization has had the overall effect of increasing the demand for skilled labor and reduced the demand for less-skilled workers, driving the downsizing of several industries, like the apparel industry, with less-skilled workforces.\(^\text{16}\) Globalization has also brought competition from low-wage workers in other countries, affecting employment opportunities and limiting wage growth in industries like steel, appliances and electronics.

These developments have not just held down wages, they have eliminated jobs, joining forces with another major change in circumstances, a surge in automation. It is estimated that in the decade between 1994 and 2004 companies spent roughly $100 billion installing nearly a million industrial robots, eliminating some 10 million jobs. Many service sector workers—from checkout clerks at Home Depot to airline ticket agents and even insurance underwriters—are also being automated out of their jobs.\(^\text{17}\) For example, between the fourth quarter of 2007 and the fourth quarter of 2009, the number of people employed as travel agents fell by 40 percent. While this drop was largely due to the recession, industry analysts expect rapid automation will keep most of these jobs from coming back as the economy strengthens.\(^\text{18}\)


\(^\text{16}\) Ibid.


The severe recession that began in 2008 has reinforced all these trends, killing an estimated 7.9 million jobs and boosting unemployment past 10%. Counting the underemployed as well as the unemployed, the rate is 17.1%—some 26 million people—who are looking for work. Meanwhile, efficiency measures, structural changes in the economy, automation and other productivity increases from technology, and a workforce working harder and longer are producing relatively “jobless” growth, so that many of the lost jobs are likely to be lost forever. Many of the new jobs that are being created are low paying, forcing people to slip significantly back on the income ladder.

Some people advocate putting up barriers to trade as a way to preserve more jobs in the U.S. — a very controversial strategy. Assuming that relatively free trade remains in place, there are at least four major strategies being advocating for insuring the availability of good jobs. One is to adjust tax, regulatory and other government policies to foster business growth. A second is to actively support the growth of businesses in targeted areas, for example by supported energy efficiency and renewable energy and growth in “green collar” jobs. A third is to make significant improvements in education and training and to do this in a way that reaches vulnerable populations. A fourth is to experiment further with innovations in social and economic policy like a negative income tax that breaks the link between income and employment.

Housing and Neighborhoods

The economic expansion of the past three decades obscured trends that have increased the need for affordable housing. The generally accepted definition of “affordability” is for a household to pay no more than 30 percent of its annual income on housing. Families who pay more risk being cost-burdened and unable to afford other necessities such as food, clothing, transportation and medical care.

A convergence of trends over the past three decades has created a situation today where one in every three American households has to spend more than 30% of their income on housing. One in seven — roughly 12 million renter and homeowner households — currently pay more than 50%. This picture worsens when the cost of transportation between work and home is included, especially when lower cost housing is only available far from places of employment.


One of the trends contributing to this problem is the cost of homes. The same house that cost 3.15 years of average income in 1975 cost 4.4 years of average income in 2008, and the cost increase was greater in many urban areas.\(^22\)

Another factor is that the supply of affordable rental housing has been shrinking. Over half of the existing rental stock predates 1970 and is becoming run down. Many longtime owners lack the means or financial incentives to invest in costly repairs, including new roofs, heating and cooling systems and windows. Operating costs are rising and many rental owners are finding it hard to keep up with rising property taxes, energy costs and insurance premiums. Billions of dollars in tax breaks, government-backed loans, capital grants and rent subsidies had helped private owners build and maintain affordable rental homes. In return for this assistance, owners committed to keep their rental units affordable for fifteen years or more. These obligations started to expire in the late 1990s. As a result, more and more owners have been selling and allowing lower-cost rental units to be converted to luxury rental units or condominiums. Other owners have been simply walking away, leaving buildings abandoned or demolished.\(^23\) On the renter side, housing vouchers, Section 8 rent subsidies, and other support programs for low-income families have been cut.\(^24\)

Before the recent housing crisis there were only 38 affordable units available for every 100 extremely low-income households (earning 30% or less of the median family income for their area); this shortage has become more extreme due to high foreclosure rates over the past two years.\(^25\) Wage levels exacerbate the shortfall: as of 2009 there was no county in the entire U.S. in which a full-time minimum wage employee could afford a one-bedroom apartment at what the Department of Housing and Urban Development considers the fair market price.\(^26\)

For African Americans, the problem of a lack of affordable housing has long been compounded by racism. “Redlining” by banks, insurance companies and realtors acted from before the century’s start to restrict the areas where African Americans could buy homes. The National Housing Act of 1934 aimed to develop housing for poor residents of urban areas, but the Act also required cities to target specific neighborhoods for specific racial groups. This meant that blacks could only get mortgages in certain areas, resulting in policy-driven racial segregation. Across the decades, as African Americans migrated


\(^{26}\) Ibid.
from the rural South to other parts of the country, both redlining and government policy acted to establish racially segregated urban ghettos.  

The Housing Act of 1937 created the nation’s first public housing program, beginning the large public housing projects that later became the hallmark of “urban renewal.” This concentrated poor, mostly Black urban residents in a few locations, isolating them from job opportunities and from most aspects of American middle-class life. Jane Jacobs’ 1961 book *The Death and Life of Great American Cities* highlighted the destructive impacts of this approach. Organized opposition to large-scale urban renewal plans developed in the 1970s and 1980s, but negative impacts of urban renewal have persisted into the early 2000s.

The post-World War II pattern of urban sprawl also contributed to the problems of inner city vulnerable populations. Concentrated poverty, defined as 40 percent or more of the population in a given area being at or below the poverty level of income, is closely aligned with the flight of primarily white, middle class people from central cities, the movement of employment opportunities to the outer regions of urban areas, and the isolation of low-income communities and communities of color. Racial discrimination played a role in causing this isolation, and the problems caused by this isolation accelerated the departure of the middle class, black as well as white, from the central city.

Ironically, most of the inner city communities that have been experiencing gentrification over the last two or three decades are the same communities that suffered population loss due to white and middle class flight, disinvestment, and diversion of resources to suburban developments. With gentrification, a reverse process occurs: middle-class, mostly white people are attracted back to the city by its convenience and cultural resources. As the community improves there is an informal economic eviction of the lower-income residents because of increased rents and property taxes. To find affordable housing, displaced people are often forced to move to distant areas requiring long commutes to jobs.

Several trends have been unfolding since the 1990s that offer more hopeful possibilities, although with mixed success to date. On the one hand, public policymakers have renewed support for mixed-income housing development in low-income neighborhoods as a means toward neighborhood revitalization and poverty amelioration. Research to date finds that, while mixed-income developments in lower-income neighborhoods have promoted area revitalization, they have accomplished less for people in these areas who live in poverty.


On the other hand, many planners and developers have been moving away from urban sprawl toward higher-density infill. Done well, this form of development provides easy access to public transportation, meets higher environmental and energy efficiency standards, and creates “mixed use” spaces (combining residential, work and commercial) where residents can walk to shops and activities. These areas are highly desirable and so tend to be expensive, but some cities are requiring a certain amount of low-cost housing to be included as a requirement for allowing higher density development. This form of development would become increasingly affordable if it spreads over the decades ahead and reconfigures the character of urban areas, but until that happens it will only be a minor source of affordable housing. Many U.S. cities are also looking to the redevelopment of blighted areas as opportunities for revitalization after decades of economic and population decline. Many experiments are underway in inner city economic development. It remains to be seen the extent to which these trends will create new housing opportunities for vulnerable populations.

**Education**

The U.S. has long been a leader in universal education. By the beginning of the 20th century, free public education was available to nearly all American children irrespective of their status in society. While Thomas Jefferson, Benjamin Franklin, George Washington, Benjamin Rush and other founders advocated free public education from the time of the nation’s founding, it took until the 1850s before “common-school reformers” like Horace Mann in Massachusetts and Henry Barnard in Connecticut began to have successes in realizing that vision.

Franklin established the first secondary school, the American Academy, in Philadelphia in 1751, but this level of education was slower to spread. In 1900, only an estimated 6 percent of teenagers graduated from high school. But as the 20th century progressed, most states enacted legislation extending compulsory education to the age of 16, so that by the end of the century about 85 percent of teenagers graduated from high school.

The establishment of land-grant colleges in 1862 by the Morrill Act expanded the base for providing university-level education, and the development of the first community colleges at the start of the 20th century provided a new institutional framework for offering vocational and technical training as well as business management skills and an avenue into further college study. Following World War II, Congress passed the GI Bill which provided financial assistance to demobilized servicemen wanting to pursue a college education – an extremely popular measure that removed many longstanding social and economic obstacles to higher education. These developments combined to create a dramatic increase in participation in postsecondary education. In 1900 less than 2 percent of Americans 18 to 24 were enrolled in a college or university. Near the end of the century more than 60 percent of this age group were enrolled in about 3500 four-year and two-year colleges. One in four adult Americans now has at

---


least a bachelor’s degree, the highest percentage of any country. Our graduate schools set the world standard.\textsuperscript{34}

Despite the overall success of our educational institutions, there is growing concern that the U.S. is not keeping pace with other nations. A 2006 OECD report found that the U.S. has slipped to 21\textsuperscript{st} among 30 OECD countries in science and 25\textsuperscript{th} in mathematics.\textsuperscript{35} SAT scores began a twenty-year decline from the mid-1960s to the mid-1980s and have not risen significantly since.

Much of the explanation for this seeming decline is that the U.S. education system suffers from severe inequities in student performance. The drop in SAT scores, for example, is caused by the fact that many more poor students, minority students, and students from the bottom three-fifths of their class are taking the SAT than in the past. If the same socioeconomic population that took the SATs in the 1960s took them today, the average score would be significantly higher than it was then.\textsuperscript{36}

This points to what is arguably the greatest challenge facing our education system: achieving greater success with the students who are most disadvantaged and vulnerable. On a national scale, students from historically disadvantaged minority groups (American Indian, Hispanic, black) have little more than a fifty-fifty chance of finishing high school with a diploma. By comparison, graduation rates for Whites and Asians are 75 and 77 percent nationally.\textsuperscript{37} The result of these inequities is that large portions of the American population are being left behind in an economy that rewards educational achievement.

Many efforts have been made to address this challenge. The Head Start program to promote school readiness is the longest running initiative. Begun in 1965, 22 million pre-school aged children had participated in it by late 2005. In recent years, the No Child Left Behind (NCLB) reform initiated by President George W. Bush mandated rigid standardized assessments of student performance, with guidelines for penalizing or closing underperforming schools. President Obama’s Race to the Top initiative has reduced the punitive aspects of NCLB and leveraged American Recovery and Reinvestment Act funds to create incentives for states to evaluate principals and teachers based on student performance, remove ineffective teachers, turn around their worst-performing schools, and achieve other objectives. President Obama’s reforms also encourage the further proliferation of “charter schools,” schools that receive public funds but are exempted from some of the rules and statutes that govern public schools. In theory, charter schools provide more freedom for innovation, but in practice there is little evidence so far that they provide better educational outcomes for disadvantaged students than public schools.

Delving into the reasons for high dropout rates among disadvantaged minority groups leads into the whole complex knot of problems involved in vulnerability, from family breakdown and alcohol and drug


\textsuperscript{36} Peter Schrag, op cit.

use to high crime rates, the lack of employment opportunities and self-reinforcing cultures of poverty. As a result, a focus on “school failure” alone will not be sufficient to meet the challenge.

For as long as studies have been done, the most reliable predictor of student success or failure has been the background and education level of parents. Parents who are educated or whose cultural background leads them to put a high value on education tend to be supportive of their children’s education, relating to them with encouragement and high expectations. For disadvantaged populations, the key question is how to replicate the benefits that come from educated parents. The answer appears to be increasing the social support they receive from every source – parents, teachers, friends, and organizations throughout their community.

Research shows that middle and high school students who perceive they are being supported on all these levels, as opposed to none or just some of them, have better attendance, spend more hours studying, avoid problem behavior more, have higher school satisfaction, are more engaged, and obtain better grades. This finding parallels earlier work on “protective factors” and building “resiliency” in youth which stressed the need to rebuild the networks and linkages between individuals, families, neighbors, schools and other community institutions that traditionally provided social supports for young people but have been weakened by the fragmentation of community life. This insight has broad implications, including the importance of smaller class sizes, effective mentoring, parental involvement, peer helping and cooperative learning, school-based service learning, and much more.

Role of Government

From the 1930s through the 1970s the federal government took on a larger role in combating poverty and protecting vulnerable populations. While this effort decreased in recent decades, there are still a wide variety of federal efforts underway, as the box below illustrates.

---


The role of government in dealing with vulnerable populations is enmeshed in a perennial debate about the proper size and role of government. Since the nation’s founding, divisions of this dimension do more to explain splits in Congressional roll call voting than any other single factor.

Polarization along this dimension declined in both chambers from roughly the beginning of the 20th century until World War II. It stabilized at this low level until the late 1970s, allowing bipartisan agreements to be forged on civil rights, poverty, environmental protection, Medicare and Medicaid and other programs that involved expansions of the federal government’s activities in relation to vulnerable populations. Polarization then began to increase and has continued to increase for the past three decades until today it is at the highest level since the end of Reconstruction,


---

Sample of Government Benefits, Grants and Financial Aid Programs

- Adoption Assistance
- Child Care Tax Credit
- College Student Loans
- Disaster Assistance for Victims
- Disability Resources
- Dislocated and Laid-Off Worker Assistance
- Employment and Training Assistance
- Food Stamps
- Head Start Program
- Home Mortgage and Housing Assistance
- Legal Assistance
- Low Income Home Energy Assistance
- Medicare
- Medicaid
- Railroad Retirement, Disability, and Unemployment Benefits
- Renter’s Assistance
- Rural Assistance Center for Health and Human Services
- School Lunch and Breakfast Program
- Senior Citizen Community Service Employment Program
- Social Security
- Supplemental Security Income
- Temporary Assistance for Needy Families
- Unemployment Insurance
- Vaccines for Children
- Veteran’s Benefits
- Weatherization Assistance
- Youth Education and Training Assistance
The government’s ability to assist vulnerable populations will also be influenced by the resources available. Sizable federal deficits have been run up over the past three decades and are being increased rapidly today, in large part to help pull the economy from recession and to prosecute two simultaneous wars in Iraq and Afghanistan. But even after the economy recovers, the government projects decades of continuing deficits and mounting debt. A recent survey of fifty of the most senior economic officials from the last eight administrations and Congressional leaders from the past 30 years shows broad agreement that the country is on an unsustainable course and that failure to address the long-term structural deficit will lead to an economic crisis. There is also consensus around the solution to the deficit problem: it must include budget controls, program evaluation, and both spending cuts and tax increases. There is little doubt, therefore, that it will be increasingly difficult to initiate expensive new efforts to assist vulnerable populations and that existing programs will be increasing pressed to demonstrate their performance.

Based on the record of the past, however, these difficult economic conditions are likely to spur innovation. Some areas of innovation already emerging that could become important include outcomes based purchasing by governments; social entrepreneurship strategies; network strategies that bring public, private and nonprofit organizations together; E-government programs; and sophisticated uses of social science-based strategies like “nudging”—non-coercive guidance toward desired behaviors.

Environment and Resources

In the 1970s, when the modern environmental movement was first emerging, some people involved in efforts related to civil rights, poverty and the plight of vulnerable populations felt that concern for the environment was distracting attention from higher priorities. In a sense they were right, because government can only attend to a limited number of issues at once.

Over time, however, it has become clear that all these issues are deeply interrelated. Scientists learned, for example, that indoor exposures to toxic substances are actually a larger health threat than outdoor exposures, largely because people today spend about 90 percent of their time indoors. Indoor pollution is estimated to cause thousands of cancer deaths and hundreds of thousands of respiratory health problems each year. In addition, hundreds of thousands of children have experienced elevated blood lead levels resulting from their exposure to indoor pollutants. The populations most vulnerable to these health problems are minorities and others who live in conditions of poverty.

It was “outdoor” issues, however, that brought these different reform movements together. A seminal event took place in 1982 in Warren County, North Carolina, when the state selected the community of


Afton as the site for a hazardous waste landfill containing 30,000 cubic yards of PCB-contaminated soil. The town’s residents, mostly African-American, rural and poor, were joined in their protests by national civil rights groups, environmental groups, clergy, and members of the Congressional Black Caucus. Although unsuccessful in halting the landfill construction, this effort marked the beginning of a broad-based “environmental justice” movement aimed at reversing the practice of placing a disproportionate burden of toxic waste and pollution on poor and minority communities.

One of the greatest potential threats to populations already vulnerable to poor health is the possibility of sharply rising energy costs. Utility bills impose a disproportionate burden on the poor. Living in the least efficient housing in the country, the typical poor household faces energy utility costs of up to 25 percent of its total income, while median income families spent an average of less than 4 percent on energy. Poorer households with automobiles are also likely to have older, less fuel-efficient models. As a result, rising energy prices impose highly disproportionate burdens on the poor, not just in monetary terms but also in their ability to keep their homes at healthy temperatures and have the mobility needed to get to places of employment.

Unfortunately, significant increases in energy prices are possible. Over the years ahead, it would not be surprising if oil prices increase to their pre-recession level of over $100 per barrel. $200 per barrel oil is even possible by 2030, and perhaps sooner. Over the past several years, growth in China, India and other fast-developing nations has increased oil demand on a scale that was not anticipated by most experts. At the same time, estimates of global oil production capacity have become more conservative. The International Energy Agency estimates that global oil production could peak as soon as 2020 – one to two decades earlier than most governments have assumed. Others have argued that it may have already peaked and that we are in for precipitous price increases.

Over the longer term, the greatest health impacts of energy use will come from climate change. People already struggling to get by will be among those most vulnerable to the impacts of climate change. A recent report by the Environmental Justice and Climate Change Initiative, a climate justice advocacy group, details aspects of climate change that will disproportionately affect the health and well-being of blacks, minorities and low-income communities. For example, heat-related deaths among blacks already occur at a 150 to 200 percent greater rate than for non-Hispanic whites, and blacks are more than twice as likely as whites to live in cities where the so-called heat island effect is expected to make temperature increases most severe. The states expected to be affected most severely by flooding and hurricanes are also the states with the highest percentage of African Americans.

However, there are many positive developments underway that, if taken advantage of, could shape a far more positive future. For example, environmental justice is increasingly stressed in government policy. It is a top priority for Lisa Jackson, the current Administrator of the EPA, and the Obama Administration is attempting to make it a government-wide priority.\textsuperscript{51}

Rapid progress on energy and climate is clearly possible, if not assured. A January 2009 study by McKinsey & Company estimates that roughly 70 percent of the technologies needed to replace fossil fuels already exist and can be sufficiently improved to make them cost-competitive without fundamental breakthroughs in technology.\textsuperscript{52} Substantial investments are also beginning to be made by venture capital firms in an effort to develop “game changing” technologies that could produce clean energy at significantly lower costs than is possible today.\textsuperscript{53} Recent studies suggest that moving toward a clean energy economy would create millions of new mid-skill “green collar” jobs that would be well within reach for lower-skilled and low-income workers if they have access to effective training programs.\textsuperscript{54} While high-tech in general does not create large numbers of new jobs, changing our energy infrastructure will require large numbers of people to weatherize buildings everywhere, install solar panels, build wind farms and solar farms, and manufacture more energy-efficient products of all kinds.

Over the past two decades, several creative strategies have been tried on a small scale to protect vulnerable populations from higher energy bills. For example, some utilities have developed programs in which they perform an energy audit and make energy-efficiency improvements at no up-front cost to the home-owner or landlord, who repays the utility over time by continuing to pay the same (or lower) energy bill even though the building is now using less energy.\textsuperscript{55}

\begin{itemize}
\item \textsuperscript{51} Administrator Lisa P. Jackson’s Remarks in 2009 to the National Environmental Justice Advisory Council. http://yosemite.epa.gov/opa/admpress.nsf/dff15a5d01abdfb1852573590040b7f7/313ec9a2bc80d677852575fa007b3c42/\textlipsum\textsuperscript{1}.
\item \textsuperscript{54} For numerous examples of green jobs creation, see the Green For All web site at: http://www.greenforall.org.
\end{itemize}
Food and Diet

Inadequate diets have created health risks for poor populations across the decades. Severe clinical malnutrition was often visible in slums and poor rural areas early in the century. Today, hunger generally manifests itself in less severe forms, mainly because established programs, including federal nutrition programs, help to provide a safety net for low-income families. While starvation is rare, many children and adults do go hungry and chronic mild undernutrition among vulnerable population groups does have harmful effects on learning, development, and physical and psychological health.

The concentration of black and poor populations in inner cities over the past several decades created a structural pattern of diet-related vulnerability. Racial discrimination combined with crime and violence and the flight of the middle class to create “food deserts” – areas in inner cities lacking access to fresh fruits and vegetables and other healthy food choices because supermarket chains would not invest in them.

In 2008 Congress directed the U.S. Department of Agriculture to study the extent of this problem. The resulting report, published in June 2009, concluded that nationwide, 23.5 million people, including 6.5 million children, live in low-income areas that are more than a mile from a supermarket. People who live in limited access areas rely heavily on small convenience stores and liquor stores which do not carry many of the foods necessary for a healthy diet and where prices are higher than in supermarkets. Several studies focused on specific local areas have reached similar conclusions. For example, a study of 1,273 food establishments in three low-income communities in Los Angeles found that the most common retail food outlets were fast-food restaurants and convenience/liquor stores. Supermarkets made up less than 2 percent of the total. Food deserts are an important factor in the high rates of obesity, diabetes, heart disease and other illnesses in low-income communities.

Since the 1980s, obesity has been emerging as a significant health problem, and during this time obesity rates have increased disproportionately among people of color and the rural poor. A study conducted from 2006 to 2008 found that obesity was 51 percent more prevalent among blacks and 21 percent more prevalent among Latinos than among whites. Significant efforts have recently begun to address this problem. The National Institutes of Health has initiated a $37 million research program to develop more effective interventions to reduce obesity. First Lady Michelle Obama has launched the “Let’s Move” campaign, which focuses on improving information on healthy eating, improving the quality of food in schools, improving food access and affordability, and increasing physical education for children. Foundations like the Robert Wood Johnson Foundation and the California Endowment have been funding efforts with many of these same objectives.


Healthy and “ethical” eating has been emerging slowly over the past several decades as a focus of concern, and may now be reaching a critical mass. More consumers are avoiding processed foods and foods with high fat, salt and sugar content and seeking out organic food as well as foods produced locally or according to evolving ethical standards – e.g., “fair trade” imported products. Concern over climate change has begun to draw attention to the food industry’s large “carbon footprint”, the high energy requirements of conventional industrial agriculture, especially for livestock production, and the energy required for shipping food over large distances. A concern for animal rights also has the potential to change eating habits. These concerns developed first in the counterculture and other groups outside the mainstream and then spread to more educated and affluent consumers. But they are increasingly influencing what food stores carry, restaurants serve, and schools provide in their lunch programs. Even Walmart and other lowest-cost stores are being influenced by these trends.

Forces outside the immediate domain of food will also affect the role that diet plays in vulnerability. For example, food prices are widely expected to increase in the coming years due to factors that will be difficult to change including water scarcity, rising fuel prices, depletion of fisheries and climate change. On the other hand, innovations in advanced sustainable agriculture, cultured meats, urban agriculture and other areas may be able to hold down food price increases as well as create new jobs.59

Criminology and Corrections

The U.S. crime rate rose from the late 1960s to the early 1980s. The homicide rate, for example, hovered in the range of 4 to 6 per 100,000 from 1950 to 1966. The figure rose to 7.9 in 1970, reached a high of 10.2 in 1980, and stayed in the range of 8 to 9 until the mid-’90s, when crime rates declined and stayed at levels not seen since the early 1960s.60

Public upset over worsening crime rates peaked during the early 1980s when crime was at its highest and a crack epidemic swept through New Orleans, Washington D.C., New York, Los Angeles, Detroit, St. Louis, Miami and Oakland. Many feared that the crime/drug problem would become much worse - not an irrational concern. The U.S. responded by expanding the definition of criminality and enacting harsher policies to address it. As a result, by 2010, the U.S. incarcerates more people than any other country. The incarcerated population has reached 2.3 million – more than one in every 100 American adults. Furthermore, one in every 1,000 American adults is serving a life sentence.61 Total spending on corrections has reached an estimated $68 billion, an increase of 336 percent since 1986.62

62 Ibid.
With far less notice, the number of people on probation or parole has become much higher than the number of people in prison – going from 1.6 million in the mid-1980s to more than 5 million today. This means that “1 in every 45 adults in the U.S. is now under criminal justice supervision in the community, and that combined with those in prison and jail, a stunning 1 in every 31 adults... is under some form of correctional control. The rates are drastically elevated for men (1 in 18) and blacks (1 in 11) and are even higher in some high-crime inner-city neighborhoods.”

This high rate of incarceration, probation and parole results from policy decisions such as “three-strikes” laws, “truth-in-sentencing” requirements, and mandatory minimum sentences. These policies led to the incarceration of massive numbers of non-violent drug offenders and extended prison terms for habitual offenders. “Zero tolerance” policies for parole violations have also driven prison growth, with parole violations accounting for more than one-third of prison admissions. The corrections system has proven largely ineffective in “correcting” the behavior of inmates so that they can reenter society successfully. A majority of released offenders return to prison within three years.

High recidivism rates suggest a pattern of self-sustaining criminality within specific populations. It is difficult to miss the high rates of incarceration of some communities and the poor housing, low incomes, lack of employment prospects, inadequate education, and poor health that exist in these communities. Two-thirds of prisoners serving life sentences are Latino or black. One in nine black men aged 18 to 34 are in prison, and one in three black males will spend some time in prison during his life.

Based on these figures, the Children’s Defense Fund has described what it calls the “cradle to prison pipeline” – a process by which poor and minority children are implicitly funneled into the criminal justice system. The economic cost of this pipeline is extremely high, not to mention the human cost: the U.S. in 2010 spends three times as much on each prison inmate as it spends on each public school pupil.

State budgets are heavily burdened by the costs of overcrowded prisons, speeding the shift toward a less punitive approach to criminal justice that still puts public safety first. Reforms are addressing the draconian sentences imposed even for low-level offenders and the huge disparities in punishment for selling powder cocaine (used primarily by affluent whites) and crack cocaine (used primarily by poor blacks). Several states have begun to close some of their prisons, despite the understandable resistance from corrections officers’ unions and local communities whose economies have come to depend on prisons. Some states, like Texas and Kansas, are reallocating funding from prisons toward community

63 Ibid.
corrections in the belief that with stronger community corrections programs they will not need to lock up so many people at such great cost.

**Technology**

From the invention of agriculture to the development of antibiotics, developments in technology have played an enormous role in lifting populations to higher living standards and improving human health. Over the past few generations, technological change has accelerated to the point that it causes major, visible changes in the world within the span of a single lifetime. Many people born before the Wright Brothers’ first flight lived to see the Apollo astronauts land on the moon.

<table>
<thead>
<tr>
<th>NAS – 20 Engineering Achievements That Have Transformed Our Lives</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Electrification</td>
</tr>
<tr>
<td>• Automobiles</td>
</tr>
<tr>
<td>• Airplanes</td>
</tr>
<tr>
<td>• Water Supply and Distribution</td>
</tr>
<tr>
<td>• Electronics</td>
</tr>
<tr>
<td>• Radio and Television</td>
</tr>
<tr>
<td>• Agricultural Mechanization</td>
</tr>
<tr>
<td>• Computers</td>
</tr>
<tr>
<td>• Telephones</td>
</tr>
<tr>
<td>• Air Conditioning and Refrigeration</td>
</tr>
<tr>
<td>• Highways</td>
</tr>
<tr>
<td>• Spacecraft</td>
</tr>
<tr>
<td>• Internet</td>
</tr>
<tr>
<td>• Imaging</td>
</tr>
<tr>
<td>• Household Appliances</td>
</tr>
<tr>
<td>• Health Technologies (e.g. vaccines, antibiotics)</td>
</tr>
<tr>
<td>• Petroleum and Petroleum Technologies</td>
</tr>
<tr>
<td>• Lasers and Fiber Optics</td>
</tr>
<tr>
<td>• Nuclear Technologies</td>
</tr>
<tr>
<td>• High Performance Materials</td>
</tr>
</tbody>
</table>

In 2003 the National Academy of Engineering produced a report, *A Century of Innovation: Twenty Engineering Achievements That Transformed Our Lives*, which aimed to identify the most important technological developments of the 20th century in terms of their impact on quality of life. The NEA invited 60 professional engineering societies to solicit nominations from their members and created a selection committee of experts from academia, corporations, government and a wide range of technical fields to develop a ranked list of twenty most important developments.  

69 The NAS report is summarized online at: http://www.greatachievements.org.
A number of these developments – electrification, health technologies, water supply and distribution, and others – have clearly improved the lives of vulnerable populations, not because they addressed the needs of poor and vulnerable groups in particular, but because they improved the lives of everyone.

Some of these technologies benefited the poor as quickly as they benefited more affluent people (municipal water systems, vaccines, cheaper food from agricultural mechanization), but many of them started out being expensive and provided few benefits to vulnerable populations until they became sufficiently inexpensive (automobiles, air conditioning, computers). As a result, technological progress has often increased disparities, at least temporarily.

Some of these technical achievements actually created new classes of vulnerable populations. Agricultural mechanization displaced tens of millions of people from the land. The application of computers to automation is displacing workers in factories and service industries at an accelerating rate. While these developments may benefit society on the whole, for a period of time they impose hardships on specific populations.

Different developments on the list had their main impact at different times. Electrification is at the very top of the list because it emerged at the very start of the century and made possible subsequent developments such as electric stoves, ovens, refrigerators, washers and dryers, radio and television, telephones, and computers. The Internet is far down the list because it came late in the century and its impacts are still just beginning to unfold. It would not be surprising if some of the developments lower on the list like the Internet and high-performance materials become extremely important in the 21st century, along with technologies in too early a stage to make this list, like photovoltaic cells, and other technologies yet to be developed.

Technological development has always been steered by social priorities and investments. To the extent that eliminating poverty and protecting vulnerable populations become higher social priorities, technological development could benefit those populations faster and more directly. The concept of “appropriate technology” has influenced international development efforts, and organizations like the National Center for Appropriate Technology have helped some low-income urban neighborhoods and rural areas benefit from low-cost, environmentally friendly technologies. Even highly advanced technologies, like biomonitoring and chemical sensors to detect toxins, can be made available to vulnerable populations through public programs.70

Cultural, Social and Generational Change

Cultural, social and generation change is one of the largest things influencing vulnerability. This is such a multifaceted area of change that it difficult to do justice to, but three aspects clearly stand out: discrimination, generational change and community and social support.

**Discrimination** From a historical perspective, racism, sexism, homophobia and religious intolerance are declining at breakneck speed, even though the pace of change can seem slow from the perspective of individuals suffering from discrimination.

Because racial discrimination has been such a large factor in the history of vulnerability, its decline is especially important. The most dramatic evidence for this decline is the way people respond to the issue that once struck terror into white hearts: miscegenation. As recently as 1978, 54 percent of Americans polled by Gallup strongly disapproved of marriages between whites and blacks and only 36 percent said they approved. By 1991 a plurality of 48 percent approved. By 2002, a majority of 65 percent of Americans approved of interracial marriages, and by 2007 that was up to 77 percent.71

Barack Obama’s election has led some people to speak of a “post-racial” era, but that is an overly optimistic interpretation. Overt racism still exists in some quarters, and what Eduardo Bonilla-Silva calls “color-blind racism” is still common in American Society.72 It emerges in many subtle ways, as in the suspicion many whites feel when they encounter a person of color who has risen to a position of power and influence that he or she probably had some sort of free ride or advantage given to them that is not available to whites. Nevertheless, the direction of change is clearly toward that “post racial” era.

The trend in regard to homophobia has been moving in the same direction. A Gallup poll in 1950 found that 94 percent of the American public opposed gay marriage. Recent polls indicate that 47 percent of Americans now believe gay marriage should be legal and only 31 percent are opposed.73 The situation with sexism is less clear. Women made huge professional gains over the past three decades, but progress appears to have slowed or stalled or even reversed in some cases. Key indicators such as pay, board seats, and corporate-officer posts all reflect a leveling off or drop in recent years.74

**Generational Change** Generations differ significantly because they experience different events and because the same events affect their lives in different ways depending on their stage of life. The two largest generations today, and potentially the most influential, are the younger “Millennials” (born 1982-2003) and the aging Baby Boom generation (born 1943 to 1955).

Millennials are more racially and ethnically diverse than previous generations. They tend to be self-expressive, self-confident, liberal, upbeat and open to change. They are tolerant of differences in religion, culture and sexual orientation. And they are on track to become the most educated generation in American history. They’re values and outlook suggest that they could play a major role in efforts to deal with the problems of vulnerable populations.

The Baby Boom generation is deeply split along cultural and political lines and by age cohorts. Boomers born between 1943 and 1955 experienced events like the civil rights movement, protests against the Vietnam War, the counterculture, the environmental movement, and the women’s movement. Living in the post-WW II boom years, they took economic security for granted, which freed them to be more experimental. On the whole, this cohort tends to be more idealistic than the Boomer cohort born after 1955, which was influenced by different early life experiences and faced harsher economic realities as they came of age.

A key question for the future of vulnerability is how the Boomers act as they move into retirement. Will they be “greedy geezers” fighting to hold on to all their government benefits, or will they be willing to accept some reductions to ease the burden on younger generations and protect the viability of Social Security and Medicare? Will many of the more idealistic early Boomers become more active in politics and social causes as they leave behind the pressures of full-time careers? Will significant numbers of Boomers with progressive values and valuable life experience become influential mentors to Millennials?

Community and Social Support During the 1960s, the town of Roseto, Pennsylvania provided dramatic evidence of the importance of supportive community and social networks for physical health and psychological well being. Medical researchers were drawn to Roseto because the Italian immigrants who had settled there died of heart attacks at half the rate of the national average despite the fact that they had comparatively low incomes, smoked and drank freely, did backbreaking and hazardous work in nearby slate quarries, and loaded their dinner tables with masses of pasta with sausages and meatballs browned in lard because they couldn’t afford olive oil. All the data investigators gathered seemed to rule out any genetic or other physical causes of this “Roseto Effect,” but two statistics were eye-catching: both the crime rate and the applications for public assistance were zero. Subsequent study showed that most houses in Roseto contained three generations and the elderly were cared for by their families and treated with great respect. Shared work experiences, evening strolls, and the many social clubs, churches, community festivals and other community rituals made for large social networks with cooperation and support extending beyond the family.

First in Roseto, and then in the study of several other communities, researchers became convinced that the characteristics of a strong community are better predictors of healthy hearts than standard medical factors like low levels of serum cholesterol or tobacco use. When people are surrounded by caring friends, neighbors and relatives, the sense of being supported reduces stress and the diseases that stress engenders. Shaffer, C. and K. Anundsen. 1995. The Healing Powers of Community. Utne Reader: September-October.

---


This insight suggests that one of the largest cultural factors increasing vulnerability to poor health is the marked decline in community and civic engagement that has occurred since the 1950s. It is what sociologist Robert Putnam has described as a society where people are increasingly "Bowling Alone." Many theories have been proposed to explain why this is happening, including increasing busy-ness and time pressure, residential mobility, suburbanization, the movement of women into the labor force, high divorce rates and disruption of marriage and family ties, the killing of Main Street by big box stores, generational differences, the amount of time spent watching television (about 40 hours per week on average for children today), and other factors.

Lack of community and social support is especially acute among disadvantaged populations suffering from family breakdown, crime and violence, and pervasive social distrust. An appreciation of the importance of social support helps transcend the dichotomy between the “culture of poverty” and “situational” theories of poverty. The culture of poverty theory posits that certain groups and individuals tend to persist in a state of poverty because they have beliefs, values and ways of behaving that are incompatible with economic success. Situational theory rejects that viewpoint as “blaming the poor” and locates the genesis of poverty in economic and social structures of society rather than in the value orientation of individuals or groups. Lack of social support is a change in the structure of society that makes it much harder for individuals to develop and maintain the beliefs, attitudes and behaviors needed to escape from poverty. Finding ways to rebuild community and create new kinds of networks for social support may be the most critical task in further reducing the number of people especially vulnerable to poor health.

Conclusion

Perhaps the greatest lesson of our history for thinking about our future was summarized by David McCullough, whose biographies of Harry Truman and John Adams won the Pulitzer Prize. In his Jefferson Lecture, the highest honor the federal government gives for achievement in the humanities, McCullough concluded that “History teaches us that nothing happens in isolation...and that nothing ever had to happen as it did.”

This lesson is as true for vulnerable populations as for any other facet of our history. The evolution of vulnerable populations cannot be understood in isolation. It has been shaped by developments as diverse as economic growth and depression, racism and the civil rights movement, industrialization and the emergence of a service economy, suburbanization and gentrification, the spread of television and the development of an addictive powder made from cocoa plants grown in South America.

And what happened was not inevitable. It was shaped by what people believed and what they did, for better and for worse. Looking back to the successes in reducing vulnerability in the New Deal, the civil

---

79 Ibid.
rights movement, the War on Poverty and many smaller, focused efforts, we should never forget how much the people involved cared, how much they dared, and how hard they worked.

The same will be true in the future. Many different kinds of developments will influence the evolution of vulnerable populations, and among the most influential will be our own values, our beliefs about what is possible, and our efforts to mold the future toward our aspirations.