WHY BIGGER ISN’T BETTER:
THE GENUINE PROGRESS INDICATOR—
1999 UPDATE
ACKNOWLEDGMENTS

Redefining Progress gratefully acknowledges the generous support of the Ford Foundation and the Merck Family Fund. We also thank those who provided the research, comments, and wise counsel that made the GPI update possible, including: Jack Appleyard, Diana Deumling, Elisa Freeing, Diana Glantemik, Ansje Miller, Judith Silverstein, and many others who contributed to this effort.
CLIFFORD COBB

Clifford Cobb has been associated with Redefining Progress since its founding in 1994. He is a graduate of the University of California, Berkeley, where he earned a master's degree in public policy. He pioneered the alternative to the gross domestic product and was one of the key researchers and co-authors for the October 1995 cover story in the Atlantic Monthly, “If the Economy Is Up, Why Is America Down?” He also contributed to RP’s report on an environmental tax reform in California, “Greening the Golden State.” Mr. Cobb’s work has been published widely. He contributed to the groundbreaking book, For the Common Good: Redirecting the Economy toward Community, the Environment, and a Sustainable Future, written by Herman Daly and John Cobb, Jr., published in 1989. He is also a co-author of the Green National Product and author of Responsive Schools, Renewed Communities, an analysis of education vouchers from a communitarian perspective. Since 1996, Mr. Cobb has been on the board of the Robert Schalkenbach Foundation, which is devoted to promoting the ideas of Henry George, a nineteenth century social reformer.

GARY SUE GOODMAN

Gary Sue Goodman is a writer, teacher, and educational consultant with particular interest in women’s issues, cross-cultural/interracial dynamics, the writing process, and efforts to protect the environment. She earned her doctorate in modern thought and literature at Stanford University, with a specialization in interdisciplinary feminist studies. She teaches advanced expository writing, gender studies, and multiethnic literature at the University of California at Davis. She also works as a freelance writer and editor for Redefining Progress and other progressive nonprofit organizations.
Mathis Wackernagel is the director of the Indicators Program at Redefining Progress. After receiving his degree in mechanical engineering from the Swiss Federal Institute of Technology, he earned his doctorate in community and regional planning at the University of British Columbia in Vancouver, Canada. There, working with Professor William Rees, he developed the “Ecological Footprint” concept as his doctoral dissertation, which has now become a widely used sustainability measure. Dr. Wackernagel has worked on sustainability issues for a number of organizations in France, Canada, Costa Rica, Mexico, and the United States, and has lectured for community groups, NGOs, and more than 70 universities in 17 countries. He has authored, or contributed to, over two dozen academic articles and co-authored various books on sustainability, including Our Ecological Footprint. He also directs the Centre for Sustainability Studies at Anáhuac University of Xalapa, Mexico.
# TABLE OF CONTENTS

I. WHY ECONOMIC GROWTH ALONE DOES NOT EQUAL PROGRESS  
   | THE GDP AS A FLAWED MEASURE OF THE ECONOMY—AND OF PROGRESS  1

II. THE GENUINE PROGRESS INDICATOR: SUMMARY OF METHOD  3

III. THE 1998 TRENDS  5
   | READING THE NUMBERS  9
   | INCOME GAP WIDENS  9
   | PROSPERITY THROUGH SHORT-TERM THINKING  10
   | FAILURE TO INVEST IN FUTURE PRODUCTIVITY  10
   | INCREASING FOREIGN OWNERSHIP OF AMERICAN ASSETS  11
   | DEPLETION OF THE COUNTRY'S NATURAL CAPITAL  11
   | SOCIAL IMPROVEMENTS  13
   | ENVIRONMENTAL HEALTH  15

IV. IMPLICATIONS FOR THE FUTURE  17

ENDNOTES  19

BACKGROUND READING  20

APPENDIX  21

CASE STUDY: FOOD FOR THOUGHT: THE GDP IS PADDED WITH FAT—OURS  25
   | SURPLUS FOOD  25
   | EXCESS WEIGHT  26
   | PAY THE DOCTOR  26
   | BUYING WEIGHT LOSS  28

REFERENCES  30

CASE STUDY: CONSUMING KIDS  33
   | CHILD'S PLAY  35
   | YOU ARE WHAT YOU EAT  35
   | BUYING SELF-WORTH  36
   | TAKE IT AND RUN  37
   | PAYING WITH PLASTIC  38

REFERENCES  41
I. WHY ECONOMIC GROWTH ALONE DOES NOT EQUAL PROGRESS

Imagine receiving an annual holiday letter from distant friends, reporting the best year ever for their family, because they spent more money this year than ever before. It began during the unusually rainy winter sparked by El Niño, when the roof sprang leaks and their yard in the East Bay hills started to slide: The many layers of roofing had to be stripped to the rafters before the roof could be reconstructed, and engineers were required to keep the yard from eroding away. Shortly after, Jane broke her leg in a car accident: A hospital stay, surgery, physical therapy, and replacing the car took a bite out of their savings. Jane, of course, couldn’t maintain her usual routine of caring for their two small children, shopping, cooking, and cleaning duties, so they hired people to help. Then they were robbed and replaced a computer, two TVs, a VCR, and a video camera; they also bought a home security system, to keep these new purchases safe.

Essentially, Jane and John’s equating money spent with well-being is like using the gross domestic product (GDP) as the barometer of nation’s economic health. The GDP is simply a gross tally of money spent—goods and services purchased by households or government and business investments, regardless of whether they enhance our well-being or not. Designed as a planning tool to guide the massive production effort for World War II, the GDP was never intended to be a yardstick of economic progress; yet, gradually it has assumed totemic stature as the ultimate measure of economic success. When it rises, the media applaud and politicians rush to take credit. When it falls, there is hand-wringing and general alarm.

THE GDP AS A FLAWED MEASURE OF THE ECONOMY—AND OF PROGRESS

As a measure of economic health, the GDP is badly flawed. First by counting only monetary transactions as economic activity, the GDP omits much of what people value and activities that serve basic needs. For example, it doesn’t count free services, such as community volunteer work or caring for children or elderly parents in the home—services that would show up in the GDP if they were paid for. It also ignores the value of leisure time spent in recreation, relaxation, or with family and friends. The GDP omits
crucial contributions of the environment, such as pure air and water, moderate climate, and protection from the sun's harmful rays, even though these services, which the earth provides for free, become expensive if they need to be bought instead. It is appropriate that an economic indicator include such measures, because common sense and history tell us that the economy is a tool to address needs and enhance well-being, not an end in itself.

More significantly, the GDP fails to distinguish between monetary transactions that genuinely add to well-being and those that diminish it, try to maintain the status quo, or make up for degraded conditions. Much that contributes to economic growth is perceived by most people as losses rather than gains: fixing blunders from the past, borrowing from the future, and shifting activities from the unpaid household or community sector to the monetized economy. For example, the GDP treats crime, divorce, legal fees, and other signs of social breakdown as economic gains. Car wrecks, medical costs, locks and security systems, and insurance are also pluses to the GDP.

Further, the GDP ignores the environmental costs of economic activities. It takes no account of the depletion of natural resources used to produce goods and services: For example, the harvesting of ancient redwood trees adds the market value of the wood to the GDP. The GDP counts pollution as a double gain to the economy: The production of oil that creates pollution adds to the GDP; then the clean-up of toxic waste sites or the Exxon Valdez oil spill ups the GDP even more. In treating the depletion or degradation of our natural resources as income rather than depreciation of an asset, the GDP violates both basic accounting principles and common sense.

To the GDP, every transaction is positive as long as money changes hands. No wonder the GDP rises continuously, adding everything as a gain, making no distinction between costs and benefits, well-being or decline. And no wonder that, while media and politicians crow about economic growth, many Americans feel strangely ambivalent or left out.
II. THE GENUINE PROGRESS INDICATOR: SUMMARY OF METHOD

To address the inadequacies of the GDP as a guide for public policy, the Genuine Progress Indicator was developed in 1994 by Redefining Progress, a nonprofit, nonpartisan public policy institute designed to stimulate public discourse on the type of future that Americans desire and how to achieve it.1 Founded on the conviction that the nation’s economy and political culture are increasingly at odds with its best values and aspirations, Redefining Progress uses research and public education to promote integrated policy approaches to social, economic, and environmental problems and to advance the principles of enterprise, responsibility, and stewardship.

The Genuine Progress Indicator (GPI) takes from the GDP the financial transactions that are relevant to well-being. It then adjusts them for aspects of the economy that the GDP ignores. The GPI thus reveals the relationship between factors conventionally defined as purely economic and those traditionally defined as purely social and environmental.

Like the GDP, the GPI begins with the nation’s personal consumption expenditures. But the GPI assesses the well-being of households, rather than focusing exclusively on the number of dollars they spend. While the GDP then adds the nation’s spending on investment and government, the GPI considers most of those expenditures defensive, and thus begins with only personal consumption expenditures as its base.

Personal consumption expenditures are then adjusted for income distribution using the Gini coefficient (see below under “Inequality Widens”). It is often assumed that the rising GDP lifts all boats, but this is not necessarily true. From 1973 to 1993, for example, while the GDP rose by 55%, real wages declined by 3.4%. In the 1980s alone, the poorest fifth of American families lost 0.5% of their income each year, while the top 5% of households increased their real income by 3.9% per year. Growth did not benefit everyone, and a true measure of well-being should take this inequality into account.

Because the GDP makes no distinction between transactions that contribute to or diminish well-being, it operates like a business income statement that adds expenses to income instead of subtracting them. The GPI, on the other hand, differentiates between what most people perceive as positive and negative economic transactions, and between the costs of producing economic benefits and the benefits themselves. It adds up the

Growth did not benefit everyone, and a true measure of well-being should take this inequality into account.

The GPI differentiates between what most people perceive as positive and negative economic transactions, and between the costs of producing economic benefits and the benefits themselves.
value of products and services consumed in the economy—whether or not money changes hands.

Using personal consumption expenditures adjusted for income inequality as its base, the GPI then adds or subtracts categories of spending based on whether they enhance or detract from our nation’s well-being.

The following nonmonetary benefits—ignored by the GDP—are included in the GPI:

1. the value of time spent on household work, parenting, and volunteer work.
2. the value of services of consumer durables (such as cars and refrigerators).
3. services of highways and streets.

The GPI then subtracts three categories of expenses that do not improve well-being:

1. defensive expenditures, defined as money spent to maintain the household’s level of comfort, security, or satisfaction, in the face of declines in quality of life due to such factors as crime, auto accidents, or pollution. Examples include personal water filters, locks or security systems, hospital bills from auto accidents, or the cost of repainting houses damaged by air pollution.
2. social costs, such as the cost of divorce, household costs of crime, or loss of leisure time.
3. the depreciation of environmental assets and natural resources, including loss of farmland, wetlands, and old-growth forests; reduction of stocks of natural resources, such as fossil fuels or other mineral deposits; and damaging effects of wastes and pollution.

(See Table A-1: The GPI Components and Their Change from 1997 to 1998 and Table A-2: Summary of the Valuation Method for Each GPI Component.)
As human illness can be concealed by a surface appearance of health, economic robustness as measured by the GDP masks a fragile state of economic growth that cannot be sustained.

FIGURE 1: GPI: ALTERNATIVE MEASURE OF ECONOMIC PROGRESS
As conventionally measured, 1998 was quite a good year for the economy. The GDP rose by 3.9% (after adjusting for inflation), just as it did in 1997. In per capita terms, this corresponds to an impressive 3% growth rate. These were the two highest growth years in a decade. But before we congratulate ourselves on a highly productive economy, we have to ask what grew, who benefited, and at what cost to our social and environmental health.

**Table 1: Gross Domestic Product Versus Genuine Progress, 1950 to 1998**

<table>
<thead>
<tr>
<th></th>
<th>GDP</th>
<th>GPI</th>
<th>GDP Per Capita</th>
<th>GPI Per Capita</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950</td>
<td>1,611</td>
<td>810</td>
<td>10,582</td>
<td>5,317</td>
</tr>
<tr>
<td>1960</td>
<td>2,263</td>
<td>1,226</td>
<td>12,525</td>
<td>6,783</td>
</tr>
<tr>
<td>1970</td>
<td>3,398</td>
<td>1,781</td>
<td>16,569</td>
<td>8,686</td>
</tr>
<tr>
<td>1980</td>
<td>4,615</td>
<td>1,982</td>
<td>20,310</td>
<td>8,722</td>
</tr>
<tr>
<td>1990</td>
<td>6,136</td>
<td>1,965</td>
<td>24,600</td>
<td>7,879</td>
</tr>
<tr>
<td>1998</td>
<td>7,552</td>
<td>1,770</td>
<td>27,939</td>
<td>6,549</td>
</tr>
<tr>
<td>TOTAL CHANGE</td>
<td>+5,941</td>
<td>+960</td>
<td>+17,357</td>
<td>+1,232</td>
</tr>
<tr>
<td>1950–1998</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
In 1998, official reports celebrated a booming economy, and the stock market kept reaching record highs. However, the GPI, the measure of household well-being, continued to slide, as it has for more than two decades (see figure 1). While the GDP rose from $20,310 per capita in 1980 to $27,939 per capita in 1988, the GPI fell from $8,722 per capita in 1980 to $6,649 per capita in 1998 (all given in 1992 dollars; see table 1).

There was a hopeful sign: The GPI fell at a slower rate that it has in ten years—by only 1%. Perhaps that may signal a bottoming out and even a future rise in the GPI, but starts in this direction in previous years have proven false.

**FIGURE 2: DIFFERENCE IN ANNUAL GROWTH RATES: GDP AND GPI**

![Graph showing difference in annual growth rates: GDP and GPI](image)
### TABLE 2: THE 1998 GPI ACCOUNT

<table>
<thead>
<tr>
<th>BILLIONS OF DOLLARS (1992 dollars)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Consumption              5,153</td>
</tr>
<tr>
<td>Income Distribution               118</td>
</tr>
<tr>
<td>Personal Consumption Adjusted for Income Inequality 4,385</td>
</tr>
</tbody>
</table>

**ADJUSTMENTS**

<table>
<thead>
<tr>
<th>Description</th>
<th>Adjustment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value of Housework and Parenting             +1,911</td>
<td></td>
</tr>
<tr>
<td>Services of Consumer Durables                +592</td>
<td></td>
</tr>
<tr>
<td>Services of Highways and Streets             +95</td>
<td></td>
</tr>
<tr>
<td>Value of Volunteer Work                      +88</td>
<td></td>
</tr>
<tr>
<td>Net Capital Investment                       +45</td>
<td></td>
</tr>
<tr>
<td>Cost of Household Pollution Abatement        -12</td>
<td></td>
</tr>
<tr>
<td>Cost of Noise Pollution                      -16</td>
<td></td>
</tr>
<tr>
<td>Cost of Crime                                -28</td>
<td></td>
</tr>
<tr>
<td>Cost of Air Pollution                        -38</td>
<td></td>
</tr>
<tr>
<td>Cost of Water Pollution                      -50</td>
<td></td>
</tr>
<tr>
<td>Cost of Family Breakdown                     -59</td>
<td></td>
</tr>
<tr>
<td>Loss of Old-Growth Forests                   -83</td>
<td></td>
</tr>
<tr>
<td>Cost of Underemployment                      -112</td>
<td></td>
</tr>
<tr>
<td>Cost of Automobile Accidents                 -126</td>
<td></td>
</tr>
<tr>
<td>Loss of Farmland                             -130</td>
<td></td>
</tr>
<tr>
<td>Net Foreign Lending or Borrowing             -238</td>
<td></td>
</tr>
<tr>
<td>Loss of Leisure Time                         -276</td>
<td></td>
</tr>
<tr>
<td>Cost of Ozone Depletion                      -306</td>
<td></td>
</tr>
<tr>
<td>Loss of Wetlands                             -363</td>
<td></td>
</tr>
<tr>
<td>Cost of Commuting                            -386</td>
<td></td>
</tr>
<tr>
<td>Cost of Consumer Durables                    -737</td>
<td></td>
</tr>
<tr>
<td>Cost of Long-term Environmental Damage       -1,054</td>
<td></td>
</tr>
<tr>
<td>Depletion of Nonrenewable Resources          -1,333</td>
<td></td>
</tr>
<tr>
<td><strong>NET GENUINE PROGRESS</strong>                    <strong>1,770</strong></td>
<td></td>
</tr>
</tbody>
</table>
READING THE NUMBERS

Instead of true progress, our current spending spree reflects a carpe diem mentality. We’re buying short-term prosperity with long-term debts. Using the Genuine Progress Indicator to analyze current economic trends uncovers these short-sighted fiscal strategies: consume excessively, borrow from foreign countries, buy on credit, deplete resources, don’t invest in future productivity, and distribute the wealth unequally. In effect, let future generations suffer the consequences.

The GPI declined at a slower rate in 1998, primarily due to the growth of the GDP’s largest component, household consumption. In 1998, personal consumption expenditures grew 4.9%, up from rates of 3.4% and 3.2% in the previous two years.

More than simply observing the rise or fall of the whole GPI, examining the changes in specific components reveals the true state of the economy and its future performance capacity.

The GPI declined because it includes increasing social, economic, and environmental costs that the continued growth of the GDP ignores. Three main factors help to explain why, despite the claims to a robust economy, many people feel uneasy, less well-off, or left behind by the apparent wave of prosperity. First, the economic growth is not distributed equally: Some have prospered while others work two jobs to get by. Second, this growth is purchased by increasing financial debts to the future, through overseas borrowing and failing to invest enough in future productivity. Third, the costs of growth include degradation of natural assets and depletion of natural resources, an ecological “borrowing” from the future that we can never hope to repay.

INCOME GAP WIDENS

Compared to 1997, the distribution of income was slightly more even in 1998. According to the Gini coefficient, a standard economic measure, income distribution improved slightly, moving from 0.459 in 1997 to 0.456 in 1998 (0 would mean every household received an equal income and 1 would mean that the richest household received all the income). But the continued long-term trend toward greater inequality has pulled the GPI down since the mid-1970s: The Gini coefficient rose from 0.397 in 1975 to 0.428 in 1990.

What this means in human terms is that the rich are getting richer while the rest of us are treading water or losing ground. Gains from the growth in GDP have accrued increasingly to the highest income earners in America, leaving the poor further and further behind. From 1975 to 1998, the proportion of total income received by the poorest fifth of the population dropped from 4.4% to 3.6%, while the proportion received by the richest fifth increased from 43.2% to 49.2%.
The significance of this long-term trend toward greater inequality is revealed when we consider how more equal distribution of income would have affected the GPI. For example, a return to the income distribution of 1992 would have raised the 1998 GPI by 11% above 1997. Had we miraculously returned to the income distribution of 1968, the year of greatest income equality since 1950 (indicated by a Gini coefficient of 0.388), the 1998 GPI would have been about 43% higher. (See Figure 3: What If the Past Had Been Different?)

Part of this widening gap between rich and poor in the 1990s derived from the tremendous surge in the value of equities. From 1990 to 1997, the market value of domestic corporations almost tripled, rising from $3,452 billion to $10,293 billion (in 1992 dollars). Obviously, the much-trumpeted stock market rise exacerbated the already widening gap between those who have inherited or invested in stocks in recent decades, and those who have barely gotten by. While the GPI reflects the widening economic gap in monetary terms, we should also consider the social costs of this increased inequality on which we can’t place a dollar value: increased alienation between rich and poor, heightened social conflict, resentment, and despair.

PROSPERITY THROUGH SHORT-TERM THINKING

If the tremendous growth in the stock market had resulted in equivalent investments in future productivity, that might indicate that the recent growth of economic activities could continue. Instead, we've purchased that growth by borrowing from the future in two significant ways: failing to invest in business capital and borrowing from overseas.

FAILURE TO INVEST IN FUTURE PRODUCTIVITY

As a sign of the short-term mentality, much of the recent growth has been channeled into consumption rather than investment: paying higher dividends to stockholders instead of reinvesting more in business capital (buildings, technology, and equipment). In capital investments in business, as measured by net additions to capital stock, the 1990s have fallen behind the 1980s. While the net additions to capital stock grew at $60 to $80 billion per year in the 1980s, this annual investment has fallen to only $45 or $50 billion per year since 1992. If capital investments had grown by $65 billion in 1998, the GPI would have held steady instead of falling (see figure 3).

Along with indicating a short-term, self-indulgent mentality, this failure to invest in the future suggests that the stock market rise may represent a temporary bubble. Without reinvestment, the growth is unlikely to continue.
INCREASING FOREIGN OWNERSHIP OF AMERICAN ASSETS

Another factor that suggests that the bubble must eventually burst is the tremendous increase in foreign ownership of American assets. In recent years, a severe trade imbalance between the United States and the rest of the world has rapidly increased. As a result, foreign capital pouring into the States in 1997 and 1998 contributed greatly to the dramatic stock market rise. But this growth in paper value from foreign investment does not represent enduring economic strength. It actually means that foreign ownership of U.S. assets grew rapidly compared to assets held by Americans overseas. When these foreign owners are eventually paid off (with interest and dividends), the investment funds will flow out of the United States again. Relying on foreign investors to pump up our stock market is equivalent to borrowing now to pay for increased consumption and forcing future generations to pay the interest.

In 1998 the growth in foreign ownership of the economy had a considerable effect on the GPI. If the net international position had not changed from 1997, the GPI would have risen by 6.6% to over $1.9 trillion, and per capita GPI would have grown by 5.6%. Instead, the per capita GPI fell by 2.1% (see table A-1 in the appendix and figure 3). Since the GPI is calculated to smooth out short-term fluctuations and reveal long-run trends, the declining international net position last year was actually worse than this number suggests; in fact, the increase in foreign borrowing was nearly three times greater in 1998 than it was in 1996.

While we have essentially financed our economic growth by borrowing overseas, the rise in paper wealth created an illusory sense of prosperity, which in turn fostered increased consumption, particularly by the wealthiest households. But this process is unsustainable. While we have added to future generations' debt burden by failing to reinvest in business and borrowing from foreign countries, increased consumption has also depleted the legacy of natural assets that will be inherited by our children.

DEPLETION OF THE COUNTRY'S NATURAL CAPITAL

Resource depletion remains one of the primary factors that contribute to the GPI's decline. Resource depletion takes a variety of forms. The GPI takes into account permanent losses (reductions in stock) of farmland, wetlands, forests, and minerals. In each case, it treats the loss on a cumulative basis. Resource depletion positively affects the economy in the year the resource is consumed (showing up as a financial transaction in the GDP), but it negatively affects people in all future years, by making the resource unavailable for use.
For example, farmland is lost when soil is eroded or compacted and when buildings or highways pave over farms at the urban fringe. In the year of erosion or conversion, the GDP may show a gain from higher production, but the loss of production capacity will last hundreds of years and counts as a loss in all future years. In the GPI, the damage from loss of farmland rose 1.9% in 1998.

Diminishing wetlands not only reduces wildlife habitat and recreational opportunities for bird-watchers and hunters; it also reduces the capacity of nature to mitigate floods and to draw pollutants out of drinking water. The costs associated with loss of wetlands increased 3.7% in 1998.

The loss of old-growth forests has been a frequent news story in the 1990s. The cutting of these forests means the elimination of certain species that cannot be replaced. It also entails the loss of recreational opportunities. In addition, ecological damage occurs in all forests (not just old growth) when roads are built, leading to erosion and downstream siltation of rivers. The costs of forest losses increased 1% in 1998.

These losses directly impact the well-being of households. Most Americans see the landscape as a precious national heritage that is our responsibility to respect and protect—we increasingly understand that wanton squandering of resources often means irrevocably damaged ecosystems and loss of ecosystem services (such as clean air and water). Aside from recognizing the loss of potential uses of this rich legacy of resources, the loss of plant and animal diversity and deterioration of the environment have a powerful emotional and moral impact on many who feel that we are failing to fulfill our responsibilities as stewards by passing on to future generations a diminished and damaged earth.

The loss that most people think of when they hear about “resource depletion” is the reduction of mineral deposits. In dollar terms, the most important form of mineral depletion in the U.S. is the pumping of oil and gas from the ground. The costs of depletion of mineral resources increased 4.0% in 1998.

The GPI treats resource depletion as a negative factor, pure and simple. In the same manner that borrowing financial resources from other countries for short-term prosperity masks the nation’s long-term debts, drawing down the stock of the natural heritage imposes unseen economic costs—it creates the need to replace the services of that resource through other means in the future. The two transactions are more alike than might seem obvious at first glance. If loss of topsoil or depletion of oil and natural gas increases U.S. dependence on imports of food or fossil fuels from other countries, the financial result is the same as when the nation borrows to sustain its short-term prosperity. In both cases, the long-term sustainability of current consumption patterns is compromised.

One aim of the GPI is to assess the ability of the economy to grow (as measured by increased personal consumption) without causing a corresponding loss of raw materi-
By using natural resources only at or below the rate of replacement, we could avoid bankrupting future generations and leave the legacy of natural capital intact.

SOCIAL IMPROVEMENTS

Along with warning that economic growth can’t be sustained indefinitely because we are living beyond our economic and environmental means, the 1998 data also suggest that the well-being of households has improved. In particular, the GPI suggests modest progress in certain measures of social and environmental well-being.

Although the distribution of income to the poor and the rich continues to show increasing inequality, involuntary underemployment has dropped in recent years. This category includes not only the officially unemployed, but also discouraged workers who have not looked for jobs, plus people who are working part time and would prefer full-time work. Since 1993, the social cost of underemployment has plummeted 35%, including an 8% reduction from 1997 to 1998.

The cost of crime to households has also dropped. From 1981 to 1994, the social cost of crime rose by 29%. That includes the direct household losses from burglaries, car thefts, and so on, plus the defensive expenses of avoiding crime by buying locks and home security systems. From 1994 to 1998, there was a reduction of 9% in these costs to households, which included a reduction of 1% from 1997 to 1998. (Because the GPI assesses the well-being of households and doesn’t count defensive expenditures as gains, the growing government cost of prisons does not affect the GPI; however, the rapid growth of prisons does contribute to the GDP.)

Several components of the GPI attempt to measure social costs of family breakdown, using as proxies the costs of divorce and the hours of television watched. The effects on the 1998 GPI of these components are mixed. During the 1980s, the GPI showed a relatively consistent rate of growth of 0.5% per year in the costs of family breakdown, but since 1994 these costs have stabilized. The total number of divorces fell from a peak of 1.21 million in 1992 to 1.13 million in 1998.

But the amount of family time devoted to television watching increased over the same period, suggesting a continued negative trend toward more socialization of children by television. As a result of increased television viewing and the powerful influence of peers on children’s values, even parents who deliberately resist the influence of com-
comercial television and the barrage of advertisements equating happiness with consumption find their children vulnerable to this message. By effectively targeting each new generation, advertising produces a continuous stream of consumers to impel the rising GDP. (See “Consuming Kids” in the appendix.)

Another measure of the quality of family life, the total hours of unpaid housework, has grown. This “shadow work”—shopping, cooking, cleaning, taking the children to sports practice or music lessons, household repairs, gardening, and all the other tasks of unpaid housework—sustains us and enables the market sector of the economy to function. The largest unacknowledged sector of the social economy, this work is still largely performed by women and ignored in standard economic accounts. In fact, when unpaid housework is transferred to the market sector where money changes hands, it contributes to the GDP. The GPI considers this unpaid work a service that has monetary value, as well as moral and emotional value, that enhances the well-being of households.

In the GPI, the value of this unpaid housework has continued to grow gradually, increasing 8% from 1992 to 1998 and 1.3% from 1997 to 1998. However, this increase in unpaid work does not indicate a rise in the average hours of housework per household. Rather it reflects an increased number of households: The increase is approximately proportional to the population growth in the same period.

Another indication of improved quality of life is a rise in volunteer time. The GDP also overlooks the volunteer sector—the hours donated under the auspices of civic, nonprofit, and religious groups, which contribute significantly to community well-being. This includes both the time spent by volunteer boards managing civic and religious organizations and the public services that these organizations provide to their communities. While from 1989 to 1993 the time devoted to volunteerism declined, between 1993 and 1995, the rate of volunteerism increased by more than 2.5% per year, and it continued to grow at 0.8% through 1998.

Taken together, these components indicate improvements in the quality of daily life for many Americans: Less underemployment, divorce, and household costs of crime, and more time devoted to both household work and volunteer work suggest greater well-being and stronger social cohesion.

However, improvement in these social factors may reflect that most Americans are working more and more, with employment, household work, and volunteer work combined. In fact, the total annual hours of work by each member of the labor force who is working as much as he or she wants has steadily climbed: from 2,678 hours per year in 1970 to 2,797 in 1980, to 2,829 in 1990, and to 2,871 in 1998. That means a decline in leisure hours (not counting changes in household or volunteer work) of 4.5% in the 1970s, 1.2% in the 1980s, and 1.5% in the 1990s. Because demands for income are rising with consumption, many feel more pressured to meet inflated expectations: Increased
work hours and declining leisure may feel more like a perpetual treadmill than a significant improvement in their quality of life.

ENVIRONMENTAL HEALTH

Although we continue to erode our natural capital by using natural resources faster than the rate of replacement, the GPI does show the effects of increased awareness that the resources and carrying capacity of the earth have limits.

One of the greatest success stories of modern times is the reduction of some localized forms of environmental damage, particularly the improvement in air quality. The GPI also shows the continuation of a long-term trend to reduce the costs of air pollution. From 1970 to 1998, the costs of health effects, damage to crops, cleaning, and other costs associated with air pollution have fallen a total of 58%. From 1997 to 1998, these costs dropped 1.3%. Although air quality has recently received a lot of media coverage, GPI numbers suggest that the most damaging effects of air pollution on health and agricultural productivity have been curtailed, a genuine improvement in quality of life.

Along with genuine gains from environmentalist policies, the GPI also underlines the difficulty in correcting damage to the environment, even if continued pollution is stopped. Some environmental problems are cumulative: Activity one year continues to cause damage several years down the road. This includes activities such as emission of greenhouse gases (which slowly but irreversibly affect the earth’s climate), the stockpiling of radioactive wastes (with no long-term solution in sight), and the accumulation of CFC gases in the upper atmosphere that allow increased deadly ultra-violet radiation to reach the earth. Although the emission of CFC gases has been largely stabilized by an international agreement preventing further production of the most harmful CFCs, the cumulative costs continue to appear as a loss in the GPI. These losses are growing at less than 1% per year. But the costs of other long-term atmospheric damage, particularly the contribution of gases to climate change, increase by more than 2% per year.
IV. IMPLICATIONS FOR THE FUTURE

The growth or decline of the GPI is based on the interplay of economic, social, and environmental factors. If the conventionally measured economy (GDP) grew without overseas borrowing, loss of social capital, or depletion of resources and environmental assets, then the GPI would grow along with it. Yet, when those liabilities increase along with the GDP, the net effect is determined by the balance of gains and losses among all the components.

As the 1999 update demonstrates, the long-term downward trend of the GPI since the mid-1970s was not necessary and could have been prevented. To illustrate, three variants were tested to show the influence of changes in the past on the 1998 GPI:

1. if the annual emissions of carbon dioxide from fossil fuels had been restricted to the level in 1950.
2. if income inequality had not deteriorated since 1968.
3. if trade deficits and surpluses had balanced each other out on average.

Figure 3 on the next page shows how each of these changes alone and the three changes compounded would have affected the GPI. Under these three hypothetical conditions, the GPI would have grown roughly proportionately to the GDP from 1950 until today.
Policies that would cause the GPI to grow are those that enhance capital, minimize resource depletion or environmental damage, promote growth from capital investment rather than foreign borrowing, and redistribute income to those with below-average incomes. If these policies were carried out without slowing the rate of conventional economic growth, the GPI would rise. However, if growth-oriented policies exacerbate financial, social, and environmental liabilities, then the GPI will continue the downward trend begun in the mid-1970s.
1. The GPI builds on work first presented in Daly and Cobb 1989.
2. Including components to account for depletion is a standard accounting convention, similar to subtracting depreciation from the gross domestic product to estimate the net domestic product. There is controversy, however, over whether resource discoveries should be treated as additions to the original stock, as the U.S. Bureau of Analysis did in the first official “Green GDP” in 1994. Redefining Progress considers this methodology appropriate for an individual firm, but not for society as a whole; it creates an illusion that humans can actually add to the stock of wealth bestowed by nature. In the GPI, mineral discoveries are not treated as additions to the stock of the earth’s resources, because that stock is actually of a fixed, if unknown, size. The GPI assumes a fixed but unspecified base from which depletions are subtracted.
BACKGROUND READING

ANIELSKI, MARK, AND JONATHAN ROWE

COBB, CLIFFORD, TED HALSTEAD, AND JONATHAN ROWE

COBB, CLIFFORD, TED HALSTEAD, AND JONATHAN ROWE

DALY, HERMAN E., AND JOHN B. COBB, JR., WITH CONTRIBUTIONS BY CLIFFORD W. COBB

MIRINGOFF, MARC, AND MARQUE-LUISA MIRINGOFF

NORDHAUS, WILLIAM D., AND EDWARD C. KOKKELENBERG (EDITORS)

VAN DIEREN, WOUTER (EDITOR)
Table A-1 shows the contribution to the GPI from five different perspectives. Column 1 shows the absolute dollar amount of each category as it is added to (or subtracted from) the overall GPI balance. For example, services of consumer durables increased the GPI by $592 billion in 1998. Column 2 gives the percentage contribution of each component. For example, the cost of family breakdown reduces the GPI by 3%. Column 3 shows the absolute dollar amount the component changed from 1997 to 1998. For example, an additional $13 billion worth of leisure time was lost in the one-year period, increasing the total loss of leisure time from $263 billion to $276 billion. Column 4 shows the magnitude by which one component has changed over the one-year period. For example, the cost of consumer durables has increased by 10.2% in one year. Column 5 presents the number of percentage points the GPI would have increased if the component had not changed over the 1997-1998 period (ceteris paribus, that is, assuming all the other columns remained as presented). For example, if the cost of underemployment had not decreased by $10 billion, the GPI would have lost 1.7 percentage points (rather than the 1.1 percentage points it actually lost).
### TABLE A-1: THE GPI COMPONENTS AND THEIR CHANGE FROM 1997 TO 1998

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Consumption</td>
<td>5,153</td>
<td>240</td>
<td>4.9%</td>
<td>-14.5%</td>
<td></td>
</tr>
<tr>
<td>Income Distribution</td>
<td>118</td>
<td>1</td>
<td>0.7%</td>
<td>1.6%</td>
<td></td>
</tr>
<tr>
<td>Weighted Personal Consumption</td>
<td>4,385</td>
<td>248%</td>
<td>231</td>
<td>5.6%</td>
<td>-14.0%</td>
</tr>
<tr>
<td>Value of Housework and Parenting</td>
<td>1,911</td>
<td>108%</td>
<td>24</td>
<td>1.3%</td>
<td>-2.5%</td>
</tr>
<tr>
<td>Value of Volunteer Work</td>
<td>88</td>
<td>5%</td>
<td>1</td>
<td>0.8%</td>
<td>-1.2%</td>
</tr>
<tr>
<td>Services of Consumer Durables</td>
<td>592</td>
<td>33%</td>
<td>35</td>
<td>6.3%</td>
<td>-3.1%</td>
</tr>
<tr>
<td>Services of Highways and Streets</td>
<td>95</td>
<td>5%</td>
<td>5</td>
<td>5.1%</td>
<td>-1.4%</td>
</tr>
<tr>
<td>Cost of Crime</td>
<td>-28</td>
<td>-2%</td>
<td>0</td>
<td>1.0%</td>
<td>-1.1%</td>
</tr>
<tr>
<td>Cost of Family Breakdown</td>
<td>-59</td>
<td>-3%</td>
<td>0</td>
<td>0.2%</td>
<td>-1.1%</td>
</tr>
<tr>
<td>Loss of Leisure Time</td>
<td>-276</td>
<td>-16%</td>
<td>-13</td>
<td>4.8%</td>
<td>-0.4%</td>
</tr>
<tr>
<td>Cost of Underemployment</td>
<td>-112</td>
<td>-6%</td>
<td>10</td>
<td>8.1%</td>
<td>-1.7%</td>
</tr>
<tr>
<td>Cost of Consumer Durables</td>
<td>-737</td>
<td>-42%</td>
<td>-68</td>
<td>10.2%</td>
<td>2.7%</td>
</tr>
<tr>
<td>Cost of Commuting</td>
<td>-386</td>
<td>-22%</td>
<td>-11</td>
<td>2.9%</td>
<td>-0.5%</td>
</tr>
<tr>
<td>Cost of Household Pollution Abatement</td>
<td>-12</td>
<td>-1%</td>
<td>-1</td>
<td>6.5%</td>
<td>-1.1%</td>
</tr>
<tr>
<td>Cost of Automobile Accidents</td>
<td>-126</td>
<td>-7%</td>
<td>-6</td>
<td>4.7%</td>
<td>-0.8%</td>
</tr>
<tr>
<td>Cost of Water Pollution</td>
<td>-50</td>
<td>-3%</td>
<td>0</td>
<td>0.0%</td>
<td>-1.1%</td>
</tr>
<tr>
<td>Cost of Air Pollution</td>
<td>-38</td>
<td>-2%</td>
<td>1</td>
<td>1.3%</td>
<td>-1.1%</td>
</tr>
<tr>
<td>Cost of Noise Pollution</td>
<td>-16</td>
<td>-1%</td>
<td>0</td>
<td>1.0%</td>
<td>-1.1%</td>
</tr>
<tr>
<td>Loss of Wetlands</td>
<td>-363</td>
<td>-20%</td>
<td>-13</td>
<td>3.7%</td>
<td>-0.4%</td>
</tr>
<tr>
<td>Loss of Farmland</td>
<td>-130</td>
<td>-7%</td>
<td>-2</td>
<td>1.9%</td>
<td>-1.0%</td>
</tr>
<tr>
<td>Depletion of Nonrenewable Resources</td>
<td>-1,333</td>
<td>-75%</td>
<td>-51</td>
<td>4.0%</td>
<td>1.8%</td>
</tr>
<tr>
<td>Cost of Long-term Environmental Damage</td>
<td>-1,054</td>
<td>-60%</td>
<td>-24</td>
<td>2.3%</td>
<td>0.2%</td>
</tr>
<tr>
<td>Cost of Ozone Depletion</td>
<td>-306</td>
<td>-17%</td>
<td>-1</td>
<td>0.2%</td>
<td>-1.1%</td>
</tr>
<tr>
<td>Loss of Old-Growth Forests</td>
<td>-283</td>
<td>-5%</td>
<td>-1</td>
<td>1.0%</td>
<td>-1.1%</td>
</tr>
<tr>
<td>Net Capital Investment</td>
<td>45</td>
<td>3%</td>
<td>1</td>
<td>1.8%</td>
<td>-1.2%</td>
</tr>
<tr>
<td>Net Foreign Lending or Borrowing</td>
<td>-238</td>
<td>-13%</td>
<td>-137</td>
<td>137.1%</td>
<td>6.6%</td>
</tr>
<tr>
<td>Genuine Progress Indicator Per Capita GPI (in dollars)</td>
<td>1,770</td>
<td>100%</td>
<td>-20</td>
<td>1.1%</td>
<td></td>
</tr>
<tr>
<td>Per Capita GDP (in dollars)</td>
<td>6,549</td>
<td>-137</td>
<td>2.1%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross Domestic Product Per Capita GDP (in dollars)</td>
<td>7,552</td>
<td>282</td>
<td>2.9%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### TABLE A-2: SUMMARY OF THE VALUATION METHOD FOR EACH GPI COMPONENT

<table>
<thead>
<tr>
<th>GPI CONTRIBUTIONS</th>
<th>CALCULATION METHOD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Consumption</td>
<td>component of GDP (68 percent of GDP in 1998)</td>
</tr>
<tr>
<td>Income Distribution</td>
<td>Gini coefficient of distribution of income among households used as index number</td>
</tr>
<tr>
<td>Weighted Personal Consumption</td>
<td>consumption divided by income distribution index</td>
</tr>
<tr>
<td>Value of Housework and Parenting</td>
<td>estimated number of hours per year times fixed dollar amount</td>
</tr>
<tr>
<td>Value of Volunteer Work</td>
<td>estimated number of hours per year times fixed dollar amount</td>
</tr>
<tr>
<td>Services of Consumer Durables</td>
<td>stock of cars, furniture, etc. times fixed percentage</td>
</tr>
<tr>
<td>Services of Highways and Streets</td>
<td>stock of highways times fixed percentage</td>
</tr>
<tr>
<td>Cost of Crime</td>
<td>direct cost to households plus defensive expenditures to avoid crime</td>
</tr>
<tr>
<td>Cost of Family Breakdown</td>
<td>divorce costs (lawyers plus effect on kids) plus imputed cost of TV watching</td>
</tr>
<tr>
<td>Loss of Leisure Time</td>
<td>difference between hours of leisure in 1969 and in other years times $11.20 per hour times labor force</td>
</tr>
<tr>
<td>Cost of Underemployment</td>
<td>members of labor force working fewer hours than they want times the number of &quot;constrained hours&quot; per year they aren't working times $11.20</td>
</tr>
<tr>
<td>Cost of Consumer Durables</td>
<td>spending on cars, furniture, etc. (offsets services of consumer durables)</td>
</tr>
<tr>
<td>Cost of Commuting</td>
<td>out-of-pocket cost plus value of time spent commuting</td>
</tr>
<tr>
<td>Cost of Household Pollution Abatement</td>
<td>spending by households on pollution abatement equipment—mostly for vehicles</td>
</tr>
<tr>
<td>Cost of Automobile Accidents</td>
<td>vehicle damage and hospital costs</td>
</tr>
<tr>
<td>Cost of Water Pollution</td>
<td>loss of water quality plus siltation</td>
</tr>
<tr>
<td>Cost of Air Pollution</td>
<td>damage to vegetation, structures, and aesthetics, soiling of cloth materials, acid rain, loss of urban property values (not health or mortality cost)</td>
</tr>
<tr>
<td>Cost of Noise Pollution</td>
<td>reduced quality of human environment</td>
</tr>
<tr>
<td>Loss of Wetlands</td>
<td>annualized value of the cumulative loss of services (purification, flood control, wildlife habitat) with value increasing exponentially as a result of scarcity value</td>
</tr>
<tr>
<td>Loss of Farmland</td>
<td>annualized value of the cumulative loss of soil productivity based on assumption that inherent soil fertility will have greater value in the future as fertilizer and other inputs become more costly (soil erosion, soil compaction, urbanization)</td>
</tr>
<tr>
<td>Depletion of Nonrenewable Resources</td>
<td>annualized value of the cumulative loss of potential services of resources that have been permanently lost (measured as increasing cost of what would be required to replace the cumulative quantity of energy resources produced domestically)</td>
</tr>
<tr>
<td>Cost of Long-term Environmental Damage</td>
<td>present value of the cumulative expected costs of future damage from climate change and nuclear waste management (fossil fuel and nuclear energy consumption times fixed dollar value per unit)</td>
</tr>
<tr>
<td>Cost of Ozone Depletion</td>
<td>cumulative world production of CFC-11 and CFC-12 times fixed dollar amount per unit</td>
</tr>
<tr>
<td>Loss of Old-Growth Forests</td>
<td>cumulative value of the loss of ecological services from old-growth forest plus damage from forest roads</td>
</tr>
<tr>
<td>Net Capital Investment</td>
<td>change in stock of fixed capital minus change in stock of capital required for new workers equals net additional stock available for all workers (swings modified by use of rolling averages)</td>
</tr>
<tr>
<td>Net Foreign Lending or Borrowing</td>
<td>change in the net international position (corresponds to change in current trade balance) smoothed by using a five-year rolling average</td>
</tr>
</tbody>
</table>
CASE STUDIES

Read on for two examples of absurd contributions to the GDP, illustrating its deficiency as a measure of progress.

“Food for Thought: The GDP Is Padded with Fat—Ours” provides data demonstrating the absurdity of counting all growth in consumption as progress. The food industry illustrates the differences between consumption that adds and detracts from genuine quality of life and demonstrates the self-replicating, self-expanding nature of economic growth.

“Consuming Kids” further highlights the need to distinguish between different types of consumption, with different effects on the consumers’ physical, mental, and psychological health. It also demonstrates how children are being socialized to buy and to buy into the idea that consumption is the route to happiness as well as the index of progress. Meanwhile, advertising creates a continuous flow of consumers to perpetuate the pattern of empty economic growth.
CASE STUDY: 
FOOD FOR THOUGHT: THE GDP IS PADDED WITH FAT—OURS

America is growing and growth is good, so America must be better off. This is what politicians would have us believe when they refer to the rise in the closely monitored barometer of economic prosperity, the gross domestic product (GDP). But what does a growing GDP really measure? It measures money changing hands, regardless of whether the transactions truly add to progress.

Consider this example: Americans spend $30 to 50 billion a year on dieting, trying to get rid of the extra growth around their midsections (Berg 1997). When it comes to food, the all-too-common cycle of overeating or eating poorly, buying diet products and exercise machines, paying the medical bills for obesity and poor nutrition, and then eating more for consolation hardly adds up to progress. That growth is unwanted by the American people, but every dollar spent advertising food products, gaining weight, and then trying to shed those unwanted pounds contributes to the GDP.

SURPLUS FOOD

Unless we’ve grown our own food, each bite that we take is digested by the GDP. Including agriculture, restaurants, and the like, $700 billion flowed through the U.S. food industry last year (Rowe and Silverstein 1999). No one will contest the need for a strong food industry, but as with other financial transactions counted as progress by the GDP, not all food-related purchases really increase well-being.

The thriving food industry nourishes what Marion Nestle, the head of the Department of Nutrition at New York University, calls the 3,800-calorie-a-day problem. America’s food producers produce enough food to supply 3,800 calories every day to every American (Perl 1999). However, the average woman only needs 2,000 calories a day, the average man 2,500, and children even less.

So what happens to all of this extra food we produce? Some is exported, but the food industry spends $10 billion each year in direct advertising and another $20 billion on coupons, games, and other gimmicks trying to convince Americans to absorb the surplus calories (Nestle 1998). Psychologists have found that when food is put in front of people, they will eat it—whether they are hungry or not. In the end, 40% of Americans admit that they eat more calories than they should (USDA 1997).
EXCESS WEIGHT

And so we grow. As the GDP goes up, so does the percentage of overweight Americans. According to the Third National Health and Nutrition Examination Survey (NHANES III), over half (55%) of American adults are currently overweight or obese (severely overweight) (National Institutes of Health 1998). While the GDP nearly tripled from 1960 to 1994 (in inflation-adjusted dollars), the rates of obese Americans nearly doubled, increasing from 12.8% to 22.5% of adults (Flegal et al. 1998). Evidence suggests an accelerating upward trend since 1994. According to the journal of the American Medical Association, the prevalence of obesity increased by 6% between 1991 and 1998 (Mokdad et al. 1999).

No demographic group is immune. The data show that obesity increased in every state, in both sexes, and across all age groups, races, educational levels, and smoking statuses (Mokdad et al. 1999).

Similar trends of increasing numbers of overweight and obese Americans are also showing up in children. Two successive Surgeons General have pronounced childhood obesity an "epidemic." Indeed, over the last two decades, the number of overweight children has increased by more than 50%, and the number of obese (extremely overweight) children has nearly doubled to roughly 14% of children and 12% of adolescents. Less than a third of children ages 6 to 17 meet the minimum standards for cardiovascular fitness, flexibility, and strength (CDC 1997).

Evidence of our increasing size takes many forms. Seats in sports stadiums, concert venues, movie theaters, and airplanes are becoming more capacious, as the old standard of 18 inches no longer comfortably accommodates the expanding American girth. In 1992, more than twenty automotive and apparel companies sponsored a project to take new measurements of the American physique and develop new standards, updating those developed by the U.S. military in 1947 (Abend 1993). Trade magazines report an ongoing controversy in the apparel industry over the new standards for women’s clothing sizes, developed partly because of the aging population and partly to address the confusion caused when designers make clothing two sizes larger than the label indicates. One instructor at the New York Fashion Institute explained the psychological ploy: "A lot of times in designer houses the cut is a bit fuller to make the woman feel she is wearing a smaller size" (Abend 1993). Inflate the sizes and sales rise, contributing to economic growth.

PAY THE DOCTOR

Denial may sell clothes, but it cannot protect us from the health consequences and the economic costs associated with being overweight. Being overweight raises children’s
risks for serious illness. Type II diabetes alone, the type associated with weight problems, has quadrupled among kids since 1982, which boosts spending on pharmaceuticals and other health costs (National Institutes of Health 1995). Evidence also suggests that risks for high cholesterol, clogged arteries, and heart disease begin in childhood, with poor diets and sedentary lifestyles (Vessey 1998).

Overweight people run a higher risk of premature death, according to a recent American Cancer Society study, the largest ever done on obesity and mortality. "The evidence is now compelling and irrefutable," says the lead researcher, Dr. JoAnn Manson of the American Cancer Society. "Obesity is probably the second-leading preventable cause of death in the United States after cigarette smoking" (Associated Press 1999). Obesity leads to such serious diseases as type II diabetes, gallbladder disease, heart disease, breast and colon cancer, and higher risk of stroke. An estimated 300,000 Americans die each year from the combined effects of an unhealthy diet and inactivity (McGinnis 1993).

These health misfortunes of Americans plump up the GDP as well. Medical spending on diseases associated with obesity amounted to $51.6 billion in 1995, including medical costs for obesity-related heart disease, cancer, stroke, and hypertension. These costs represent 5.7% of national health expenditures within the United States (Wolf and Colditz 1998). Although this spending contributes to the GDP, it would be tough to argue that it makes us better off.

The indirect costs of obesity, such as lost productivity, are also substantial, and may have an even greater impact, both on the overall economy and on society, than direct medical spending. Obesity exacted another $47.6 billion in such costs in 1995 (Wolf and Colditz 1998), for a total cost of $99.2 billion.

But the costs and effects of a poor diet go beyond obesity. Diets high in calories, fat, cholesterol, and salt, and low in fiber and nutrition, contribute to heart disease, certain types of cancer, stroke, diabetes, hypertension, and osteoporosis, as well as to obesity. Taken together, these health conditions cost an estimated $250 billion each year in medical spending and lost productivity (Frazao 1996).

More than two-thirds of Americans are trying to lose or maintain their weight, according to a recent study of more than one million Americans by Mary K. Serdula at the Centers for Disease Control and Prevention. They spend $33 billion each year on weight-loss products and services (Serdula 1999). The medical costs associated with dieting are harder to count, but evidence suggests that dieting itself can undermine health: one recent study found that radical reductions in calorie intake reduce the effectiveness of protective cells in the immune system that fight viruses and tumors (USDA 1997).

If eating too many calories and leading a sedentary lifestyle lead to weight gain, it only makes sense that moderately limiting calorie intake and increasing physical activity would lead to weight loss. In fact, that is what both the U.S. Department of Agriculture's Dietary Guidelines and the National Heart, Lung, and Blood Institute's
Clinical Guidelines recommend. Yet only one in five people in the U.S. who are actively trying to control their weight follow these recommendations (Serdula 1999).

Eating fewer calories and exercising for at least thirty minutes each day do not require spending any money. In fact, this dieting regime could even decrease spending on food. If more dieters followed the recommended guidelines, they would probably have more success at achieving their weight-loss goals and could reduce the $33 billion spent on dieting in the process. Not to mention the costs of roughly 110,000 liposuctions last year, at $2,000 or more apiece (Rowe and Silverstein 1999).

**BUYING WEIGHT LOSS**

But so many Americans are habituated to buying solutions to problems that they prefer diet drinks disguised as pop or milkshakes and even surgery to altering their unhealthy eating habits and sedentary lifestyles. No pain. Just gain.

Retail trade magazines report record expansion in sales of weight control products, now a billion-dollar business. For example, sales in the "meal replacement" category— including products such as Slim Fast Food’s Meal on the Go, USA Nutritional’s MaxiFat Burning System, and CyperGenics’ Super Weight Loss Shakes— hit $957 million in 1998, a 28.5% increase over 1997. Diet pill sales rose 4.9% to $153.8 million in the same period (Chain Drug Review 1999). Consumers spent another $3.5 million on home exercise equipment in 1995 (Business Wire 1996), and $5 billion in 1997 (Business Wire 1998). One trade magazine hailed this remarkable growth, calling the treadmill "the exercise machine of the nineties," unwittingly coining an apt symbol for our current sense of progress (Business Wire 1998).

While many Americans eat too many calories and spend money trying to lose the excess weight that results, 10% of Americans are going hungry or do not have enough food for an active and healthy life (USDA 1999). Nationally, 9.7% of households were rated "food insecure" in 1996-1998, according to a recent USDA study of census statistics (USDA 1999). But the GDP is blind to how food is distributed. It goes up just as much when some go hungry and some overeat as when everyone has a reasonable amount.

If increasing the size of our economy means spending lots of money on empty calories and then more money to get rid of the results, it is no wonder that eating disorders are increasing and appearing in younger and younger children. Researchers have found that almost half of American elementary students between the first and third grades want to be thinner (Mellin et al.). Further, cases of anorexia and bulimia have doubled in the past ten years, according to the National Institute of Mental Health, with the sharpest increases in teenage girls (Schuster 1999). "Bulimia may be the trademark
affliction of the growth era," as Jonathan Rowe and Judith Silverstein (1999) assert. "It is a disease of literal obedience to the schizoid messages that barrage young girls: indulge yourselves wantonly but also be taut and svelte."

Scanning through magazines for teenage girls and women, one finds advertising for high-calorie energy drinks as well as svelte models touting the benefits of diet shakes. Both sales show up in the GDP. If we were attending to genuine progress, as does the GPI, overeating, then dieting, then treating eating disorders and surgically removing excess fat would be considered a net loss for our psyches, our perceptions of ourselves, and our well-being. The physical and mental health costs of our dysfunctional relationship with food should not be included in any true measure of progress.
ABEND, JULES

ASSOCIATED PRESS

BERG, FRANCES M.

BUSINESS WIRE

CENTERS FOR DISEASE CONTROL

CHAIN DRUG REVIEW

FLEGAL, K. M., M. D. CARROLL, R. J. KUCZMARSKI, AND C. L. JOHNSON

FRAZAO, ELIZABETH

MCGINNIS, J. M., AND W. H. FOEGE

MELLIN ET AL.
MOKDAD, ALI H., MARY K. SERDULA, WILLIAM H. DIETZ, BARBARA A. BOWMAN, JAMES S. MARKS, AND JEFFREY P. KOPLAN

NATIONAL INSTITUTES OF HEALTH. NATIONAL HEART, LUNG, AND BLOOD INSTITUTE

NATIONAL INSTITUTES OF HEALTH. NATIONAL INSTITUTES OF DIABETES AND DIGESTIVE AND KIDNEY DISEASES

NESTLE, MARION

PERL, REBECCA

ROWE, JONATHAN, AND JUDITH SILVERSTEIN

SCHUSTER, KAROly

SERDULA, MARY K., ALI H. MOKDAD, DAVID F. WILLIAMSON, DEBORAH A. GALUSKA, JAMES M. MENDLEIN, AND GRETORY W. HEATH

U.S. DEPARTMENT OF AGRICULTURE


VESSEY, JUDITH A., PAULA K. YIM-CHIPLIS, AND NANCY R. MACKENZIE

WOLF, A. M., AND G. A. COLDITZ
CASE STUDY: CONSUMING KIDS

Long before children know how to read and write, they are learning the ABCs of consumption. Popular culture and role models suggest that buying things is the root of all happiness, and that kids can’t live without the latest breakfast cereal or toy. Stuff is good, more is better, too much is just enough.

In fact, children’s spending has been on the rise since the 1960s. This increased personal consumption, according to conventional economic measures such as the GDP, is equated with progress. But are kids progressing? Are they better off? Statistics concerning their physical and mental health, their eating, smoking, and drinking habits, their mounting debts, and their suicide rates say no.

Children’s aggregate spending has recently increased exponentially, according to Texas A&M marketing professor James McNeal, the nation’s leading researcher on marketing that targets children. Children ages 2 to 14 directly influenced parental spending of $188 billion in 1997 and indirectly influenced $300 billion more, while controlling their own purchases of $25 billion (McNeal 1999a). Between 1994 and 1998, teen spending also jumped, from $63 billion to $94 billion a year (Zollo 1995 and 1999).
The standard economic assumption that consumers represent rational people, making decisions in their own self-interest, probably fits few human beings— but certainly breaks down when it comes to children and teens.

Both self-reports and documented behaviors of American youth show that seeking pleasure and peer approval from mood-altering—even addictive—substances often leads them to ignore well-known and serious risks to health. The percentage of high school students who smoke increased between 1992 and 1998. In 1998, despite prolific warnings of the health hazards of smoking from school programs, flashy media campaigns, and high-profile law suits, 9\% of eighth graders, 16\% of tenth graders, and 22\% of twelfth graders still reported smoking daily in the previous month. The percentage of high school seniors reporting heavy drinking also increased, from 28\% in 1993 to 32\% in 1998 (National Institute on Drug Abuse 1999).
CHILD'S PLAY

Children's games appear harmless in comparison to these patterns of teen consumption, but are they? Even a casual glance at the amazing trends in children's toys in the past few decades calls this into question. The habit of dealing with emotional problems by buying something to change one's mood or self-image doesn't start with teenagers.

Remember Hula-Hoops? A lot of empty hoopla compared to the recent lucrative fads, with kids en masse hopscotching from Cabbage Patch Dolls, to Ninja Turtles, to Beanie Babies, to Pokemons. It's not kid stuff to the toy-makers, however. Profits from Cabbage Patch Kids reportedly reached $4 billion in the 80s (Augusta [Ga.] Chronicle 1999). At the end of this year, Ty Inc. is retiring Beanie Babies, after three boom years of earning about $250 million per year since their debut. In this business, that's a long time, as one trade observer noted: "They got 3 good years out of this. I mean Tickle Me Elmo dolls was [popular] for what, 4 months?" (Jamieson 1999). Contributions to the GDP from sales of these tiny toys are huge. Meanwhile, children quickly learn the importance of owning the hottest new items.

Yet "classic toys" retain their appeal, and some make strong impressions, flaunting fantastic bodies that may undermine kids' self-esteem. Despite the well-publicized critiques of Barbie's implausible proportions and the distorted sense of the female body she engenders in young girls, spending on Barbie dolls increased from $263 million in 1980 to $1.2 billion in 1994 (Cross 1997). Newer on the horizon are the equivalent "action figures" for boys, which advertise similarly extreme fantasy physiques for males. Recently, researchers Harrison Pope and Roberto Olivardia observed how action figures have bulked up. Seeing this as significant and symbolic, they measured the toys' dimensions and did the math: "The original G.I. Joe is a wimp compared with the updated model. The new Batman has the proportion of a 30-inch waist, 57-inch chest and 27-inch biceps. His is a body as improbable as Barbie's" (San Francisco Examiner 1999; Hall 1999). But implausibility doesn't protect boys' self-esteem, which Harrison and Olivardia believe has plummeted, possibly contributing to escalating violence among male teens (San Francisco Examiner 1999).

YOU ARE WHAT YOU EAT

Junk food grabs the highest share in the children's market at 34.6%. It even ranks above spending on toys, games, and crafts, which garner a combined share of 31.3% (McNeal 1992). This aspect of children's consumption merits a further look: Why do children make such choices? How do they affect their physical health?
Not surprisingly, children’s snack selection and food requests—mostly for sweetened cereals, candy, and salty snack foods—parallel the products advertised on their favorite television shows and influence their families’ purchasing habits. American children watch an average of 21 to 28 hours of television each week. By high school graduation, the typical teen will have spent 12,000 hours in school and watched between 15,000 and 18,000 hours of television. With up to 21 ads per hour in TV programming for children, 16% of children’s viewing time is actually devoted to advertising. The average American child sees over 10,000 commercials a year, a large proportion of which are devoted to selling food products, many high in calories, cholesterol, sugar, and salt, but low in nutrients (Vessey 1998).

No wonder that children’s obesity has been ranked “an epidemic” by two Surgeons General, and the health problems and costs associated with excess weight are increasing at an alarming rate. (See “Food for Thought” for more information and discussion of these trends.) Television watching is a likely and significant contributor to the declining health of American youth: One study found that obesity risks among adolescents increased with higher average hours of television viewing (Vessey 1998). In part, this higher risk derives from munching snack foods and drinking soft drinks during the sedentary hours in front of the tube.

The trend towards more inactive entertainment is exacerbated by the increasing popularity of computers and video games. One-third of teenagers own their own computers and 17% own modems (TRU 1999a). As more teens have cyber access, stationary hours spent surfing the Internet, playing computer games online, and chatting with friends electronically soar. “Today’s teens are growing up in the time of computer interactivity,” says Peter Zollo, president of Teenage Research Unlimited (TRU 1999a). This greater “computer interactivity” obviously contributes to physical inactivity, thus to increased health problems associated with a sedentary life.

BUYING SELF-WORTH

At the same time as advertising encourages unsophisticated consumers to buy products that damage their physical health, the ads themselves erode kids’ self-esteem. They catch children in a vicious cycle, encouraging them to eat foods and live lifestyles that induce weight gain, while teaching them to see thin as attractive and fat as repulsive, by using stereotypically thin women and super-fit muscular men in advertising and shows. The more a child’s self-confidence declines, the more vulnerable he or she may be to messages linking consumption and happiness. For example, researchers have found that overweight children are influenced more by the covert messages in food advertisements than are average weight children (Vessey 1998).
There is also evidence that children increasingly measure self-worth by the products they own. According to a poll commissioned by the Center for a New American Dream, almost two-thirds of parents worry that their own children define their self-worth in terms of possessions, and feel that this problem has worsened over time. Nevertheless, the same parents have found their kids' entreaties hard to resist: More than half of the parents admitted to buying their child a product that they disapproved of, because the child wanted it in order to fit in with his or her friends (Center for a New American Dream 1999).

An increase in children's spending on clothing also reflects the need to look stylish, keep up with trends, and try to purchase a sense of belonging and acceptance. Spending on apparel is currently the fastest-growing category in children's consumption (McNeal 1998). From the mid- to late 1980s alone, the percentage of children's spending devoted to clothing rose sharply from an insignificant share to 11.5%. The increased clothing sales could reflect the "needs for identification (with certain others) and separation (from certain others)," as well as the need to look stylish to bolster self-esteem (McNeal 1992). By the time they become teenagers, clothing overtakes food as the highest spending category, accounting for more than a third of their consumption (Chain Drug Review 1999). Not surprisingly, male and female teens spend their money in different ways: Female teens buy more clothes, while male teens buy more food and entertainment (Zollo 1995).

TAKE IT AND RUN

Given the obsession with brand names as a boost to self-esteem, we shouldn't be surprised to see the new trend that police call "fashion crime." For example, in January 1999, three teenagers were shot within twenty minutes in Prince George's County, a Washington suburb—all for their Eddie Bauer jackets (Rowe and Silverstein 1999).

No doubt, in these times of alleged prosperity, many parents and children are feeling the squeeze of limited economic resources and escalating desires, perceived as needs. The GDP is blind to income distribution, while the GPI takes it into account as a crucial measure of well-being. Compared to 1997, the distribution of income was slightly more even in 1998, as Why Bigger Isn't Better: The Genuine Progress Indicator 1999 Update reports. But this slight improvement has done little to impact the long-term trend that has consistently widened the income gap since 1968 (see Why Bigger Isn't Better for further discussion and evidence). Similarly, from 1997 to 1998, numbers of poor children and their poverty rate dropped slightly, from 14.1 million (19.9%) in 1997 to 13.5 million (18.9%) in 1998. Until the last two years, the child poverty rate had not dropped below 20% since 1980. However, in long-term trends, the child poverty rate rose from
15.1% in 1970 to 18.3% in 1980, and to 20% in 1990, so this dip below 20% is merely a return to the levels of the 1980s (U.S. Census 1999).

Although in general crime rates have been falling, there is evidence that this may not improve the well-being of the young. The nation's violent crime rate fell 7% in 1998 and was 27% lower than in 1993. There were significant decreases in every major type of violent and property crime measured in the 1997 Criminal Victimization survey, and virtually every demographic group experienced substantial drops in violent victimization, according to a Bureau of Justice Statistics press release (U.S. Department of Justice 1999). However, the most recent special report, "Age Patterns of Serious Violent Crime," reveals that crimes disproportionately targeted the young. People under age 25 were the most vulnerable to serious violent crime between 1992 and 1994: People ages 12 to 24 suffered almost half of the total violent crimes, half of the robberies, and almost 56% of rapes and sexual assaults, although they made up less than a quarter of the population considered (victims under the age of 12 are not counted) (U.S. Department of Justice 1997a).

Further, while the total arrests for violent crime dropped, arrests of people under 15 for violent crimes have increased, from 4.7% of the total arrests in 1980 to 5.3% in 1997. In an era of alleged prosperity, the increasing desire for material goods well beyond people's actual income levels may maintain crime rates, especially among youth with passionate desires, limited resources, and compromised impulse control.

PAYING WITH PLASTIC

For the more fortunate—or better credit risks—banks make it easier to legally gratify those unaffordable desires, by paying with plastic. Already, "35% of teens are interested in getting credit cards in their own names," according to Teenage Research Unlimited, and 32% of teens ages 18 and 19 already have them (TRU 1999b). For youth who gain access to college, access to credit cards often follows: In one survey of college undergraduates at three universities, Georgetown sociology professor Robert Manning found 70% have credit cards. "It's easier for unemployed students to get credit than low-to middle-income families," Manning reports (Brobeck and Gillis 1999).

While some argue that youth can learn fiscal responsibility from this power to buy on credit, evidence shows disturbing trends. In fact, these trends have prompted the Consumer Federation of America to lobby Congress to require parental approval or minimum income levels for minors to get their own credit cards. From 1996 to 1997, Manning found the average college student's credit card debt had risen from $1,879 to $2,226 (Brobeck and Gillis 1999). Other studies report that the college student's average unpaid balance is $1,366; fully 16% pay only the monthly minimum; and 80% don't
know how long it takes to pay off a balance of $1,000, by making only minimum monthly payments (Weissman 1999).

Perhaps they will learn, but meanwhile, escalating anxiety about debt interrupts many students’ college education. About half of all students who drop out of college, according to the 1998 National Student Loan Survey, are impelled by their anxiety about debts.

If they make it to the degree, college graduates find themselves spending on average $150 a month repaying their education loans, but nearly five times as much—$700 a month—paying off their other debts (Consumer Reports 1999). Though this burden may be partly attributed to high college costs, student spending patterns on nonessential items suggest that many youth also have difficulty controlling their spending when credit cards give them carte blanche (Weissman 1999). Sadly, those students represent the success stories.

Bankruptcies filed by people under age 25 have grown by 50% since 1991, according to Harvard Law School professor and bankruptcy expert Elizabeth Warren, and she expects another 100,000 youth to file for bankruptcy this year (Consumer Reports 1999). In more tragic cases, desperation over their uncontrollably mounting debts has contributed to suicides. At the University of Oklahoma alone, a junior who racked up $10,000 in debt on a dozen credit cards despaired of paying them off on minimum wage earnings and hanged himself. So did a freshman, who maxed out her credit card in less than four months and hanged herself, leaving $2,500 worth of credit card bills displayed on her bed (Brobeck and Gillis 1999).

LOSING THEIR WAY

Other trends in children’s and teens’ psychological health clearly contradict the supposed benefits of increased spending. Elliot Gershon, former chief of the clinical psychogenetics branch of the National Institute of Mental Health, observed in 1989 that the trend of American children suffering from some form of depression was “rising almost exponentially and shows no signs of letting up” (Lankard 1999). Sales of antidepressants reveal the accuracy of this prediction. In 1998, three types of antidepressant drugs, Prozac, Zoloft, and Paxil, were wildly popular, with sales over $1 billion (Moore 1999). Currently, six million American children under age 12 are taking Prozac or other antidepressants (Lankard 1999).

Along with this alarming evidence of depression, youth suicides have also soared. Although total suicide rates in the U.S. have remained remarkably consistent in the last decade, youth suicides of youth between 15 and 19 years old have tripled since 1950, rising from 2.7 per 100,000 in 1950 to 5.9 in 1970 and 11.1 in 1990, then falling to 10.5 in
1995 (U.S. Department of Justice 1997b). Although historically lower than those of white youth, suicides rates for black youth, between ages 10 and 19, more than doubled, from 2.1 per 100,000 in 1980 to 4.5 per 100,000 in 1995 (Butterfield 1999).

No doubt, one contributor to increased suicide is increased access to guns. In 1987, an estimated 400,000 youngsters carried handguns to school (Parenthood Web 1999). By 1998, that statistic had increased to one million (Parents Resource Institute for Drug Education 1999). In Night Falls Fast: Understanding Suicide, Dr. Kay Redfield Jamison explains: "For young people in particular, who have a very impulsive element to their suicide, having access to a means of suicide that is quick and irrevocable like a gun is an unnecessary risk" (quoted in Butterfield 1999). Even if they are primarily impulsive, these increased suicides certainly reinforce the impression that increased consumption is not improving the quality of life for American youth.

Have American youth achieved progress in the last decade? Their spending patterns say yes. The GDP and the economy say yes. Common sense, however, says no. Increased disposable income may be an economic benefit, but children's spending patterns—on more junk food, more cigarettes, liquor, and drugs—and their rising physical and mental health problems should be counted as social costs, and should depress a measure of progress.
REFERENCES

AUGUSTA (GA.) CHRONICLE

BROBECK, STEPHEN, AND JACK GILLIS

BUTTERFIELD, FOX

CENTER FOR A NEW AMERICAN DREAM

CHAIN DRUG REVIEW

CONSUMER REPORTS

CROSS, GARY

HALL, STEPHEN S.

JAMIESON, ROBERT

LANKARD, CHRISTINE
MCNEAL, JAMES


MOORE, THOMAS

NATIONAL INSTITUTE ON DRUG ABUSE (NIDA)

PARENTHOOD WEB

PARENTS RESOURCE INSTITUTE FOR DRUG EDUCATION

ROWE, JONATHAN, AND SILVERSTEIN, JUDITH

SAN FRANCISCO EXAMINER

TEENAGE RESEARCH UNLIMITED


U.S. CENSUS BUREAU
U.S. DEPARTMENT OF JUSTICE. BUREAU OF JUSTICE STATISTICS


VESSEY, JUDITH A., ET AL.


WEISSMAN, RACHEL


ZOLLO, PETER


Redefining Progress advocates for progress for people and nature, not just for the economy. It believes that genuine progress would move the U.S. toward a society that provides for all its peoples’ material needs; operates democratically and transparently; appreciates individual, religious, and cultural differences; broadens access to information, choice, and opportunity; and, all the while, restores and sustains a vibrant natural environment.

We are misled when we equate “progress” with the growth of our globalizing economy, which favors delivering financial returns to investors through expanding markets even when environmental quality and the quality of people’s lives are sacrificed. Economic gain at the expense of a healthy environment, people, households, and communities is not progress. Indeed, it imperils the very future of humanity.

Redefining Progress asserts that we have a moral obligation to address the needs of people and nature. It advocates the development of accurate monetary and nonmonetary indicators of how we are doing, as well as incentive-based policies that will stimulate genuine progress. It focuses its efforts largely on the United States, knowing that redefining progress here will have enormous global repercussions.

In its first five years, RP has enjoyed great success with such highlights as the Genuine Progress Indicator (and related Atlantic Monthly feature article), the subsequent launch and support of the Community Indicators Network, the Economists’ Statement on Climate Change, and the development and promotion of Environmental Tax Reform (ETR), to name a few. RP’s work has been featured in many of the nation’s top newspapers, magazines, and television news programs, and has drawn support from diverse constituencies, including mainstream economists, corporate executives, environmentalists, public officials, professors, and social justice organizations, among others.