

**The 2008 Foundation for Child Development Child and Youth Well-Being Index (CWI) Report, Including**

- **An Update of the CWI for the Years 1975-2006,**
- **Projections of the CWI for 2007, and**
- **A Special Focus Report on an Intergenerational Comparison of Adolescent Well-Being**

**July 22, 2008**

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### **The Foundation for Child Development (FCD)**

The Foundation for Child Development (FCD) is a national, private philanthropy dedicated to the principle that all families should have the social and material resources to raise their children to be healthy, educated, and productive members of their communities.

The Foundation seeks to understand children, particularly the disadvantaged, and to promote their well-being. We believe that families, schools, nonprofit organizations, businesses, and government at all levels share complementary responsibilities in the critical task of raising new generations.

### **Kenneth C. Land, Project Coordinator**

Kenneth C. Land, Ph.D., is the John Franklin Crowell Professor of Sociology and Demography at Duke University. He has conducted extensive research on contemporary social trends and quality-of-life measurement, social problems, demography, criminology, organizations, and mathematical and statistical models and methods for the study of social and demographic processes. He is the co-author of five books, more than 100 research articles, and numerous book chapters. Dr. Land has been elected a Fellow of the American Statistical Association, the Sociological Research Association, the American Association for the Advancement of Science, the International Society for Quality-of-Life Studies, and the American Society of Criminology.

## Introduction—Executive Summary

### I. Overview

The **Foundation for Child Development Child and Youth Well-Being Index (CWI) Project at Duke University**, issues an annual comprehensive measure of how children are faring in the United States. The CWI is based on a composite of 28 *Key Indicators* of well-being that are grouped into seven *Quality-of-Life Domains*, including economic well-being, health, safety, educational attainment, and participation in schooling, economic, and political institutions. This year's CWI is an updated measure of trends over the 31-year period from 1975 to 2006, with projections for 2007.

### II. Child and Youth Well-Being Index: Major Trends

The major trends that can be drawn from the 2008 CWI Update include:

#### **Progress in American children's quality of life has remained in a stall/slow growth period.**

After an upward trend for eight years, 1994 through 2002, improvements in the well-being of America's children and youth have been slow at best. Overall well-being – as measured by the composite *Child and Youth Well-Being Index (CWI)* – peaked in 2002, after 9/11, at 102.17. Since then, the CWI has dipped and risen only by fractional amounts. For 2006, the CWI is estimated to be 102.5, which is only slightly higher than its value for 2002.

#### **How Much Better Could We Be Doing With Respect to Child and Youth Well-Being? How much larger could the CWI numbers be?**

To put these CWI values into perspective, it should be noted that previous CWI reports have reported on “best practice” analyses to address the question: How much better could the United States do with respect to child and youth well-being? That is, how much better would the CWI numbers be if: (1) the U.S. were at its historically best ever values on all 28 Key Indicators in the Index, and (2) if the U.S. were at the best international practice frontier in the sense that recent values on the 28 Key Indicators of the CWI were at the best recorded internationally for any country for which comparable data are available. These analyses have led to the conclusions that, if recent values of all Key Indicators for the U.S. were at our best ever historical values, the CWI would be in the range of 120-125, and, if the U.S. were at the best recent internationally observed values for any nation, the CWI would be in the 145-150 range. These correspond roughly to 20 to 25 percent and 45 to 50 percent improvements, respectively. In either case, they clearly indicate that, even though the CWI in recent years is well above its lows of the mid-1990s, there remains substantial room for improvement.

#### **The rise in children's quality of life in 2002 is now seen as a temporary reaction to 9/11.**

This year's analysis shows that, rather than signaling an upward trend, the up-tick across indicators in 2002 was more likely a collective – and anomalous – reaction to 9/11. As America united behind a common purpose, communities and families came together as well. This was reflected in the surge in the *Social Relationships* and *Emotional and Spiritual Well-Being* indicators. Those indicators declined in the subsequent years, contributing to an overall stall in children's well-being.

**The economic recession and slow growth of 2001-2002 negatively impacted several indicators in the *Family Economic Well-Being* component of the CWI**, such as the poverty rate for families with children ages 0 to 17, the rate of such families with at least one parent with secure employment, and median family income. This resulted in corresponding declines in the *Family Economic Well-Being* domain that continued into 2003. This was followed by slight increases in 2004, 2005, and 2006.

**The macroeconomic problems of 2007 and especially 2008 likely will similarly have negative impacts on several indicators and domains of well-being in the CWI and thus in this composite measure of trends in child well-being.** As in 2001-2002, it is likely that these macroeconomic problems will impact a number of indicators of *Family Economic Well-Being* for families with children and adolescents. If this period of economic duress is sufficiently deep and long, it also will impact public finances and, through that, publicly financed childcare, health, and education programs.

### **III. Intergenerational Comparisons of Adolescent Well-Being—Baby Boomer Parents Compared to Their Echo Boomer Children**

A number of Key Indicators included in the CWI are measures of well-being in the second decade of life—adolescence—or can be specialized to this age range. In addition, since the base year of the CWI is 1975 and many of these indicators date back to the mid-1970s, the well-being of adolescents in the early 2000s can be compared to that of their parents' generation.

Adolescents in the early 2000s were born in the late 1980s and early 1990s. In demographic parlance, they are *echo-boomers*, children of *late baby boomers* (born in the years 1955-1964) and often called *Generation Y* or the *Millennial Generation* in the popular press.

In order to make comparisons that are not unduly affected by statistical fluctuations of indicators for a particular year, we compare three-year averages of a number of Key Indicators for the years 1975-1977 and 2003-2005. These three-year averages are 28 years apart. Thus, for example, a high school senior in 1975-1977 would have been 17 years of age on average and approximately 45 years old in the 2003-2005 years when they likely would be parents of 12<sup>th</sup> graders. While some parents of 12<sup>th</sup> graders in the early 2000s were older and some were younger, on average, the separation of generations in recent U.S. history has been on this order. Comparisons of observed rates of specific indicators ordered by domains of well-being follow.

These intergenerational comparisons show that Echo Boomer adolescents in the early 21<sup>st</sup> century as compared to their Baby Boomer parents were:

- ✓ slightly more likely to live in families below the poverty line, and
- ✓ had test scores on reading and mathematics that are only slightly higher than those of their parents.

On the other hand, they were:

- ✓ at much lower risk of death from accidents, violence, or disease,

- ✓ but also substantially more likely to be overweight or obese, with associated health problems and risks.

At the same time, they were:

- ✓ much less likely to participate in risky behavior (bear children, be victims of violent crime or violent crime offenders, and smoke cigarettes, binge drink, or consume illicit drugs) than their parents, and
- ✓ more likely to participate in school and economic institutions.

These intergenerational differences in adolescent well-being are interpreted in terms of changes in American society across the past three decades, including changes in parenting styles and community contexts as the Baby Boomers themselves matured into middle age.

Will these generally good trends in adolescent well-being continue into the 2006-2008 years? Since the adolescents of today also are late-Echo Boomer children, it likely is the case that their well-being will be similar to that of their slightly older predecessors. But there also are portents of possible deteriorations in adolescent well-being. We cite three of these, including recent upturns in poverty levels among children of single-parents, teenage birth rates, and in certain safety/behavioral indicators (adolescent violent crime victimization and offending, illicit drug use). The comprehensive, composite structure of the CWI helps us to recognize that these upturns should not just be viewed in isolation; rather, they are indicative, not just of potential problems in these particular behaviors and conditions, but, more generally, of adolescent well-being as a whole.

## **The Child and Youth Well-Being Index (CWI) 1975 – 2006, with Projections for 2007**

### **I. Child and Youth Well-Being Index: A Brief Overview**

The *Child and Youth Well-Being Index (CWI)* is an evidence-based composite measure of trends over time in the quality of life of America's children from birth to age 18. The CWI tracks changes in the well-being of children annually as compared to 1975 base year values.

The CWI is designed to address questions such as the following:

- Overall, on average, how did child and youth well-being in the U.S. change in the last quarter of the 20<sup>th</sup> century and beyond?
- Did it improve or deteriorate?
- By approximately how much?
- In which domains of social life?
- For specific age groups?
- For particular race/ethnic groups?
- And did race/ethnic group and gender disparities increase or decrease?

The CWI is computed and updated annually, and is based on data from the Key Indicators through the year 2004. Updates on most of Key Indicators currently are available for the years 2005 and 2006, and two are available for 2007. The remaining indicators are projected by use of statistical time series models. Due to the substantial inertia in many of the indicators time series, the one-year-ahead projected values have been found to be quite accurate.

### **II. Changes in the CWI – Recent and Long-Term**

The objective of the Child and Youth Well-Being Index is to give a view of changes over time in the overall well-being of children and youth in the United States. The composite Index, an equally-weighted average of the seven domains, gives a sense of the overall direction of change in well-being, as compared to a base year of the indicators, 1975. For this reason, the focus of the Index is not primarily on specific indicators, but rather on the way in which they interact and change over time.

Children and youth live unique lives and as such, at some point, each experiences a range of social conditions. The Index is comprised of Key Indicators associated with different stages of the life course in the first two decades of life.

The CWI includes the following 28 Key Indicators in seven domains of well-being that have been found in numerous social science studies to be related to an overall sense of subjective well-being or satisfaction with life. Appendix A briefly describes the Methods of Index Construction for the CWI. Sources for time series data on the Key Indicators are presented in Appendix B. Unless otherwise noted, indicators refer to children ages 0-17:

*Family Economic Well-Being Domain*

1. Poverty Rate (All Families with Children)
2. Secure Parental Employment Rate
3. Median Annual Income (All Families with Children)
4. Rate of Children with Health Insurance

*Health Domain*

1. Infant Mortality Rate
2. Low Birth Weight Rate
3. Mortality Rate (Ages 1-19)
4. Rate of Children with Very Good or Excellent Health (as reported by parents)
5. Rate of Children with Activity Limitations (as reported by parents)
6. Rate of Overweight Children and Adolescents (Ages 6-19)

*Safety/Behavioral Domain*

1. Teenage Birth Rate (Ages 10-17)
2. Rate of Violent Crime Victimization (Ages 12-19)
3. Rate of Violent Crime Offenders (Ages 12-17)
4. Rate of Cigarette Smoking (Grade 12)
5. Rate of Binge Alcohol Drinking (Grade 12)
6. Rate of Illicit Drug Use (Grade 12)

*Educational Attainment Domain*

1. Reading Test Scores (Ages 9, 13, and 17)
2. Mathematics Test Scores (Ages 9, 13, and 17)

*Community Connectedness*

1. Rate of Persons who have Received a High School Diploma (Ages 18-24)
2. Rate of Youths Not Working and Not in School (Ages 16-19)
3. Rate of Pre-Kindergarten Enrollment (Ages 3-4)
4. Rate of Persons who have Received a Bachelor's Degree (Ages 25-29)
5. Rate of Voting in Presidential Elections (Ages 18-20)

*Social Relationships Domain*

1. Rate of Children in Families Headed by a Single Parent
2. Rate of Children who have Moved within the Last Year (Ages 1-18)

*Emotional/Spiritual Well-Being Domain:*

1. Suicide Rate (Ages 10-19)
2. Rate of Weekly Religious Attendance (Grade 12)
3. Percent who report Religion as Being Very Important (Grade 12)

Taken together, changes in the performance of these 28 Key Indicators and the seven domains into which they are grouped provide a view of the changes in the overall well-being of children and youth in American society. Each domain represents an important area that affects well-being/quality of life: economic well-being, health, safety/behavior, educational attainment, community connectedness (participation in major social institutions), social relationships, and emotional/spiritual well-being. The performance of the nation on each indicator also reflects the

strength of America’s social institutions: its families, schools, and communities. All of these Key Indicators either are well-being indicators that measure outcomes for children and youths or surrogate indicators of the same.

Figure 1 charts changes since 1975 in the overall composite CWI and Figure 2 displays changes in the seven domain-specific indices.

Figure 1: Child Well-Being Index, 1975-2006, with Projections for 2007

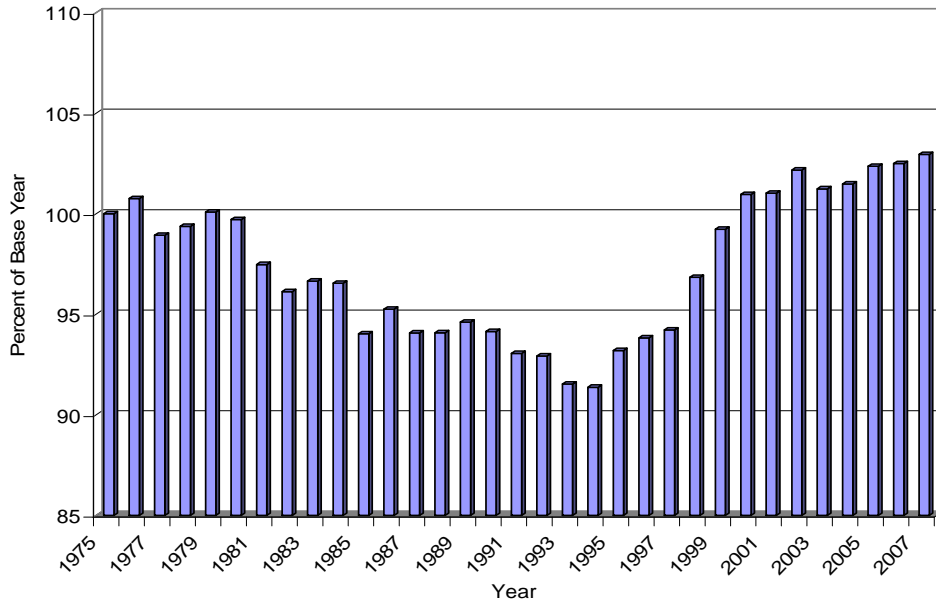
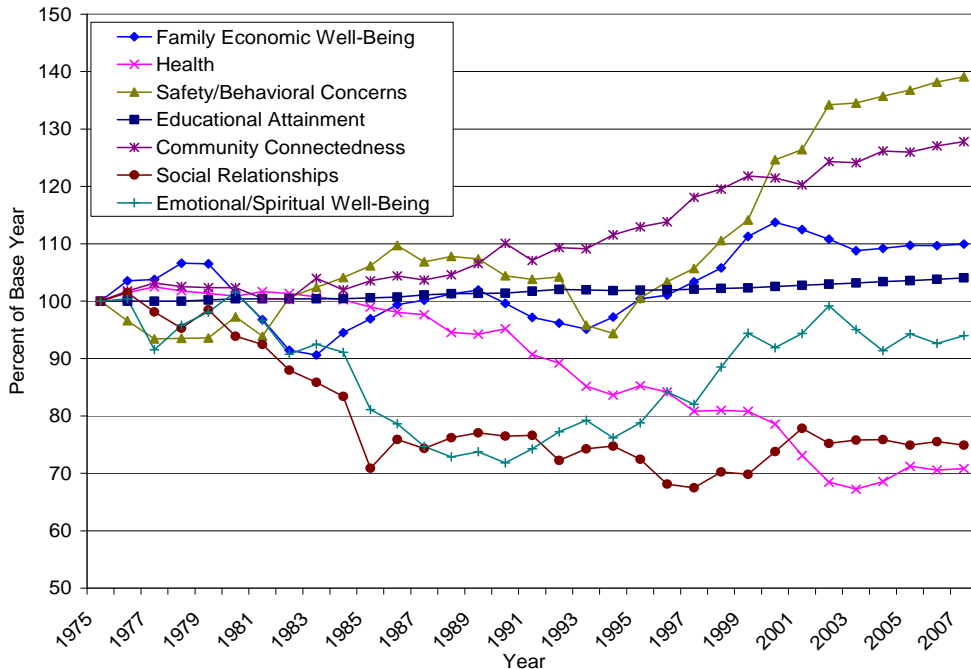


Figure 2. Domain-Specific Summary Indices, 1975-2006, with Projections for 2007.





## Recent Changes

Figure 1 shows that the CWI improved slightly in 2005 (the last year for which data are available for almost all 28 Key Indicators), increasing from 101.48 in 2004 to 102.36 with (partially projected) values of 102.5 in 2006 and (mostly projected) 102.95 in 2007.

The past eight years from 2000 to 2007 all have CWI scores greater than the 100 of the base year 1975.

Specifically, *between 2004 and 2005*:

- **Five of the seven domains** of well-being tracked by the CWI *improved slightly*:
  - family economic well-being,
  - health,
  - safety/behavior,
  - educational attainment, and
  - emotional/spiritual well-being.
  
- **Two of the seven domains** of well-being *worsened*:
  - community connectedness, and
  - social relationships.
  
- **Fifteen of the 28 Key Indicators** in the CWI *improved*:
  - poverty,
  - median family income,
  - child and adolescent mortality,
  - activity limitation reported by parents,
  - overweight children and youth,
  - teenage births,
  - smoking,
  - drinking,
  - drug use,
  - violent crime victimization,
  - high school completion,
  - reading (projected),
  - math (projected),
  - suicide, and
  - religion importance.
  
- **Nine of the 28 Key Indicators** *worsened*:
  - health insurance,
  - single parenthood,
  - residential mobility,
  - low birth weight,
  - infant mortality,
  - very good or excellent health reported by parents,
  - violent crime offenders,
  - college degree, and
  - preschool enrollment.

➤ **Four of the 28 Key Indicators *remained the same*:**

- secure parental employment,
- not working or in school,
- church attendance, and
- voting (projected).

## Long-Term Changes

With its base year of 1975, the CWI also can be used to assess long-term changes (through 2005) in child and youth well-being.

Specifically, *since 1975*:

➤ The overall composite CWI is ***up only about 2 percent*** over its 1975 base year value of 100.

➤ **Four of the domains** of well-being ***improved***:

- family economic well-being,
- safety/behavior,
- educational attainment, and
- community connectedness.

➤ **Three of the domains** of well-being ***declined***:

- health,
- social relationships, and
- emotional/spiritual well-being.

➤ **21 of the 28 specific Key Indicators *improved***:

- median family income,
- health insurance,
- secure parental employment,
- residential mobility,
- infant mortality,
- child and adolescent mortality,
- very good or excellent health reported by parents,
- teenage births,
- smoking,
- drinking,
- drug use,
- violent crime victimization,
- violent crime offenders,
- high school completion,
- not working or in school,
- college degree,
- preschool enrollment,
- voting,
- reading,

- math, and
- religion importance

➤ **Seven of the 28 Key Indicators *declined*:**

- poverty,
- single parenthood,
- low birth weight,
- activity limitation reported by parents,
- overweight,
- suicide, and
- church attendance.

**Comparisons by Time-Period**

An analysis of the CWI by time-period over the 30 years from 1975 to 2005 helps to clarify the pattern of trends.

<i>Period</i>	<i>Starting Index Value</i>	<i>Ending Index Value</i>	<i>Change During Period</i>
1975 – 1980	100.00	99.71	-0.29%
1980 – 1985	99.71	94.03	-5.69%
1985 – 1990	94.03	94.15	+0.13%
1990 – 1995	94.15	93.20	-1.01%
1995 – 2000	93.20	100.96	+8.33%
2000 – 2005	100.96	102.36	+1.39%

The CWI showed relative stability in overall child and youth well-being in the five years from 1975 to 1980 followed by a sharp decline from 1980 to 1985. This was followed by further deterioration through the mid-1990s. The last half of the 1990s saw a dramatic recovery of the CWI to at or above its 1975 value of 100. In the most recent five year period from 2000 to 2005, the Index has been in a period of slight fluctuations up and down. This last period through 2005, as has been noted in previous annual CWI updates, essentially is a stall and merits careful attention, as the stall could eventually turn into either a new period of deterioration or renewed improvement.

**Preliminary Estimates of the CWI for 2006 and 2007**

Because of the time needed to compile and publish data for many national social indicators, especially vital statistics, observations for most of the 28 Key Indicators in the CWI are not yet available for 2007 – in fact, only 2 of the 28 have been published. For 2006, the database is better: 20 of the 28 Key Indicators are available. This, of course, is not an unusual situation for national indicators, including demographic and economic indices. In such cases, projections of the missing data series, based on statistical time series models, are made in order

to produce preliminary estimates of the indices. We have done this for the missing Key Indicators for 2006 and 2007. The results are as follows.

***Between 2005 and 2006:***

- The **composite CWI** is expected to ***increase slightly*** from 102.36 to 102.5.
- **Four of the seven domains** of well-being are projected to ***improve slightly***:
  - social relationships,
  - safety/behavior,
  - educational attainment, and
  - community connectedness.
- **Three domains** are projected to ***deteriorate***:
  - family economic well-being,
  - health, and
  - emotional/spiritual well-being.
- Of the **20 Key Indicators** in the CWI for which *we have observations for 2006*:
  - ***7 improved***
    - poverty,
    - single parenthood,
    - infant mortality,
    - smoking,
    - drinking,
    - drug use, and
    - preschool enrollment,
  - ***11 worsened***
    - median family income,
    - health insurance,
    - low birth weight,
    - very good or excellent health reported by parents,
    - activity limitation reported by parents,
    - teenage births,
    - violent crime victimization,
    - high school completion,
    - college degree,
    - church attendance, and
    - religion importance
  - ***2 remained the same***
    - residential mobility, and
    - not working or in school.
- Of the **8 Key Indicators** in the CWI for which *we have made projections for 2006*:
  - ***6 are projected to improve***
    - child and adolescent mortality,
    - violent crime offenders,

- suicide,
- voting,
- reading, and
- math,
- *1 is projected to worsen*
  - secure parental employment
- *1 is projected to remain the same*
  - overweight.

***Between 2006 and 2007:***

- The **composite CWI** again is projected to *increase slightly* from 102.5 to 102.95.
- **Six of the seven domains** of well-being are projected to *improve slightly*:
  - family economic well-being,
  - health,
  - safety/behavior,
  - educational attainment,
  - community connectedness, and
  - emotional/spiritual well-being.
- **One domain** is projected to *deteriorate*:
  - social relationships.
- Of the **2 Key Indicators** in the CWI for which *we have observations for 2007*:
  - *1 worsened*
    - drug use
  - *1 remained the same*
    - smoking.

In brief, the well-being of America's children and youth is expected to continue in a relatively stable/slightly increasing trend through 2007.

**How Much Better Could We Be Doing With Respect to Child and Youth Well-Being? How much larger could the CWI numbers be?**

Index numbers are useful in helping us to ascertain how we are performing with respect to the well-being of children and youth in the United States as compared to baseline values from a particular base year. But precisely because index numbers are predicated on values for specific base years, they are, to some extent, arbitrary. In addition, index numbers are somewhat opaque in the sense that it is difficult to know how to interpret their values and changes therein.

To put the CWI values reviewed above into perspective, it should be noted that previous CWI reports have addressed these limitations of index numbers by reporting on "best practice" analyses to address the question: How much better could the United States do with respect to child and youth well-being? That is, how much better would the CWI numbers be if: (1) the U.S. were at its historically best ever values on all 28 Key Indicators in the Index, and (2) if the

U.S. were at the best international practice frontier in the sense that recent values on the 28 Key Indicators of the CWI were at the best recorded internationally for any country for which comparable data are available. These analyses have led to the conclusions that, if recent values of all Key Indicators for the U.S. were at our best ever historical values, the CWI would be in the range of 120-125, and, if the U.S. were at the best recent internationally observed values for any nation, the CWI would be in the 145-150 range. These correspond roughly to 20 to 25 percent and 45 to 50 percent improvements, respectively. In either case, they clearly indicate that, even though the CWI in recent years is well above its lows of the mid-1990s, there remains substantial room for improvement.

### **Looming Macroeconomic Concerns That May Cause a Downturn in the CWI for 2007 and 2008**

Even though our current expectations are that the CWI for 2007 will show a slight improvement over its 2005 and 2006 values, the *adverse macroeconomic conditions*—the housing finance crisis, rising inflation (especially for gasoline, other energy, and food), and job losses—that emerged in 2007 and continued and expanded in 2008 may adversely affect the Key Indicators and Domains of Well-Being that comprise the CWI. It is likely that these macroeconomic problems will impact a number of indicators of Family Economic Well-Being for families with children and adolescents. If this period of economic duress is sufficiently deep and long, it also will impact public finances and, through that, publicly financed childcare, health, and education programs. Thus, it is entirely possible that data on child and youth well-being for 2007 and 2008 will show some retreat from levels reached in the mid-2000s. In fact, based on the performance of the CWI during prior economic recessions, we anticipate that there will be a one to two point decline in the overall composite CWI in the 2007-2009 period. Only time and data will tell if these anticipations become reality.

### **III. Special Focus Report—A Comparison of Echo Boomer Adolescents with Their Baby Boomer Parents**

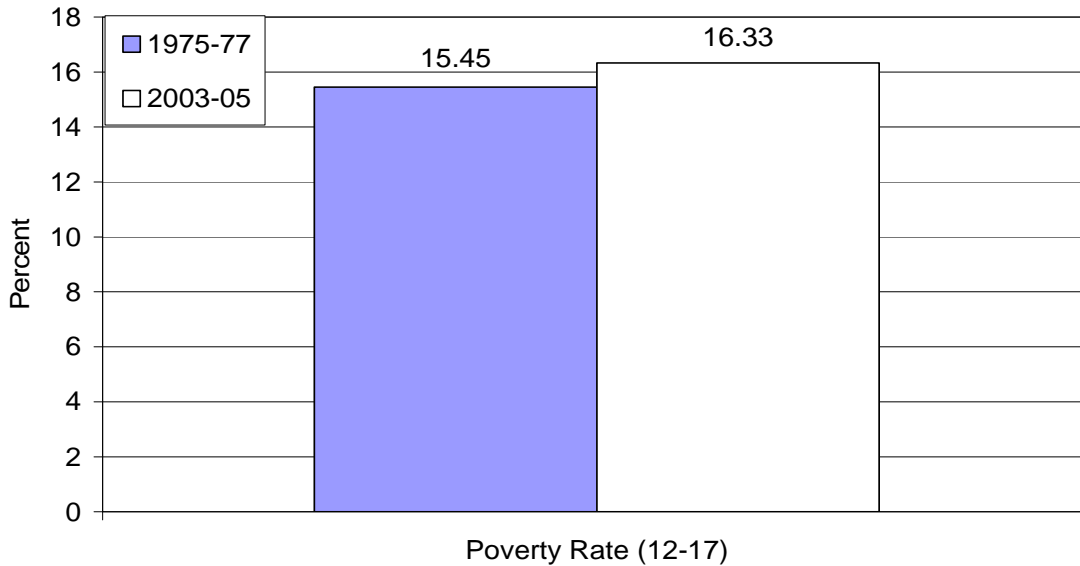
A number of Key Indicators included in the CWI are measures of well-being in the second decade of life—adolescence—or can be specialized to this age range. In addition, since the base year of the CWI is 1975 and many of these indicators date back to the mid-1970s, we can compare the performance of adolescents in the early 2000s to that of their parents' generation. Adolescents in the early 2000s were born in the late 1980s and early 1990s. In demographic parlance, they are *echo-boomers*, children of *late baby boomers* (born in the years 1955-1964) and often called *Generation Y* or the *Millennial Generation* in the popular press.

In order to make comparisons that are not unduly affected by statistical fluctuations of indicators for a particular year, the following comparisons are based on three-year averages of the respective Key Indicators for the years 1975-1977 and 2003-2005. These three-year averages are 28 years apart. Thus, for example, a high school senior in 1975-1977 would have been 17 years of age on average and approximately 45 years old in the 2003-2005 years when they likely would be parents of 12<sup>th</sup> graders. While some parents of 12<sup>th</sup> graders in the early 2000s were older and some were younger, on average, the separation of generations in recent U.S. history has been on this order. Comparisons of observed rates of specific indicators ordered by domains of well-being follow.

#### **Economic Well-Being and Health**

The only Key Indicator of Family Economic Well-Being available for this intergenerational comparison is the Poverty Rate, defined as the percent of adolescents ages 12-17 living in families with annual incomes that fall below the official poverty line as defined by the Census Bureau. While the official poverty line is well known to be flawed as an indicator of poverty, trends over time in this indicator generally have been found to correlate positively with trends in other indices of poverty. In any case, Figure 3 contains a bar chart of this percent for 2003-05 (16.33) as compared to 1975-77 (15.45).

Figure 3. Poverty Rate (Ages 12-17) for the Years 1975-1977 and 2003-2005



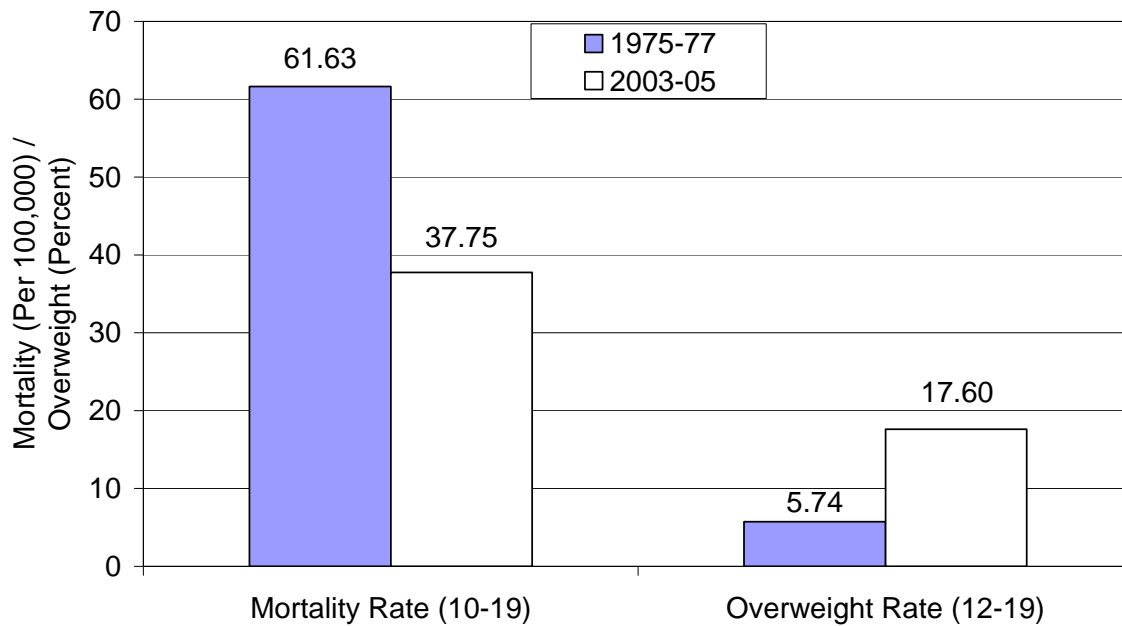
The only possible conclusion from Figure 3 is that no progress has been made in a generation with respect to reducing the likelihood that adolescents live in families with poverty-level incomes. In fact, the indicator for this condition of well-being is slightly higher in recent years than it was a generation ago, thus indicating that America’s long-standing War on Poverty has lost ground, at least with respect to the economic status of families with children.

Some analysts have argued that this increase may, in part, be due to increased levels of undocumented immigration into the U.S. during the last two decades, immigrants who take jobs with poverty level incomes and have relatively high levels of childbearing and rearing. Others have related this increase to structural changes in the economy—as compared to the late-1970s, changes in the economy over the past two decades associated with globalization have increased income disparities between those with the highest and lowest incomes with an accompanying decline in relative well paying factory jobs, which have moved overseas. Returns on education have increased, thus rewarding those with higher educational attainments. But individuals, including parents, with lower levels of education have fewer relatively well-paying employment opportunities.

Figure 4 contains rates for two health indicators that show mixed results for today’s adolescents as compared to their parent’s generation. Specifically, it contains bar charts of the mortality rate for ages 10-19 and the rate (percent) of adolescents ages 12-19 who are classified as overweight according to Centers for Disease Control criteria.



Figure 4. Mortality Rate (Ages 10-19) and Overweight Rate (Ages 12-19) for the Years 1975-1977 and 2003-2005



The good news shown in Figure 4 pertains to the mortality rate for echo boomer adolescents (37.75 per 100,000) as compared to that of their parent’s generation (61.63 per 100,000). This is a remarkable 38.75 percent decline. This is a great success story, due to many factors including reduced automobile and playground deaths, reduced violent crime deaths, and better medical treatments for certain diseases. By comparison, however, those adolescents are about three times more likely to be overweight than were their parents a generation ago. Again, there are many factors that have affected trends in adolescent obesity, including dietary changes and decreased physical activity, both during school hours (with reductions in, and/or elimination of, physical education periods) and during after school activities (with the growth in popularity of video games over the past 25 years).

### Safety/Behavioral Indicators

Figure 5 shows bar charts for intergenerational comparisons of three safety/behavioral indicators: the teenage birth rate (ages 15-17), the violent crime victimization rate (ages 12-17), and the violent crime offending rate (ages 12-17), all per 1,000 persons in these age ranges. The teenage birth rate declined from 34.70 per 1,000 females ages 15-17 in 1975-77 to 21.97 in 2003-05. This is a 36.7 percent decline across the generations. Again, this is a great success story due to the efforts both of parents and many activist anti-teenage childbearing groups. The violent crime victimization rate declined from 84.07 to 48.12 per 1,000 adolescents ages 12-17, a 42.8 percent decline. By comparison, the violent crime offending rate decline from 32.9 to 15.23 per 1,000, a 53.7 percent decline.

Figure 5. Teenage Birth Rate, Violent Crime Victimization Rate and Offenders Rate for the Years 1975-1977 and 2003-2005

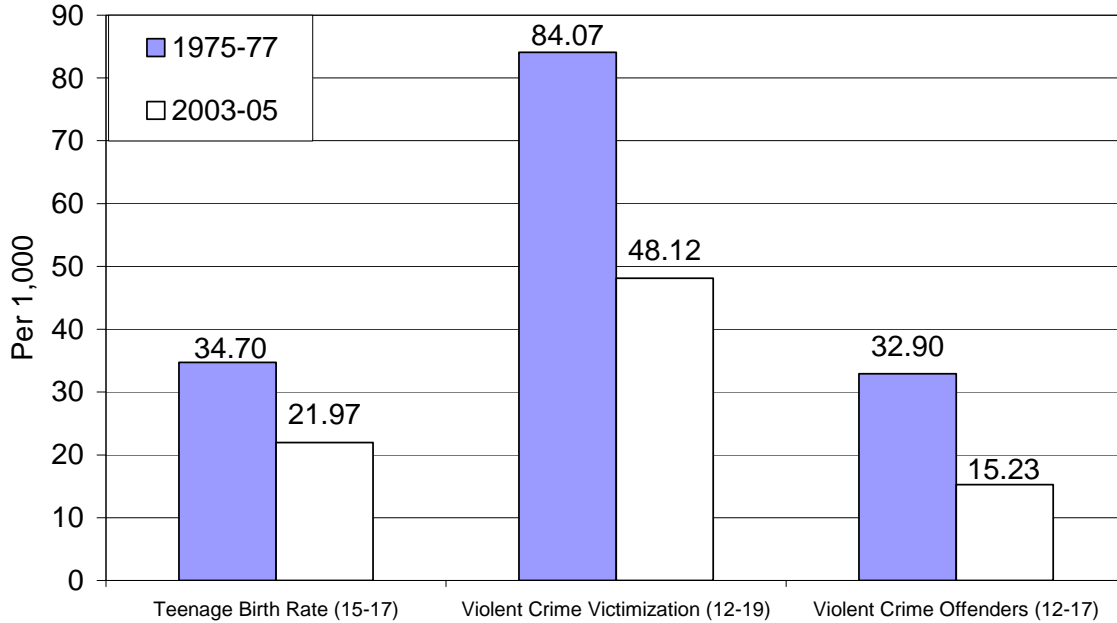
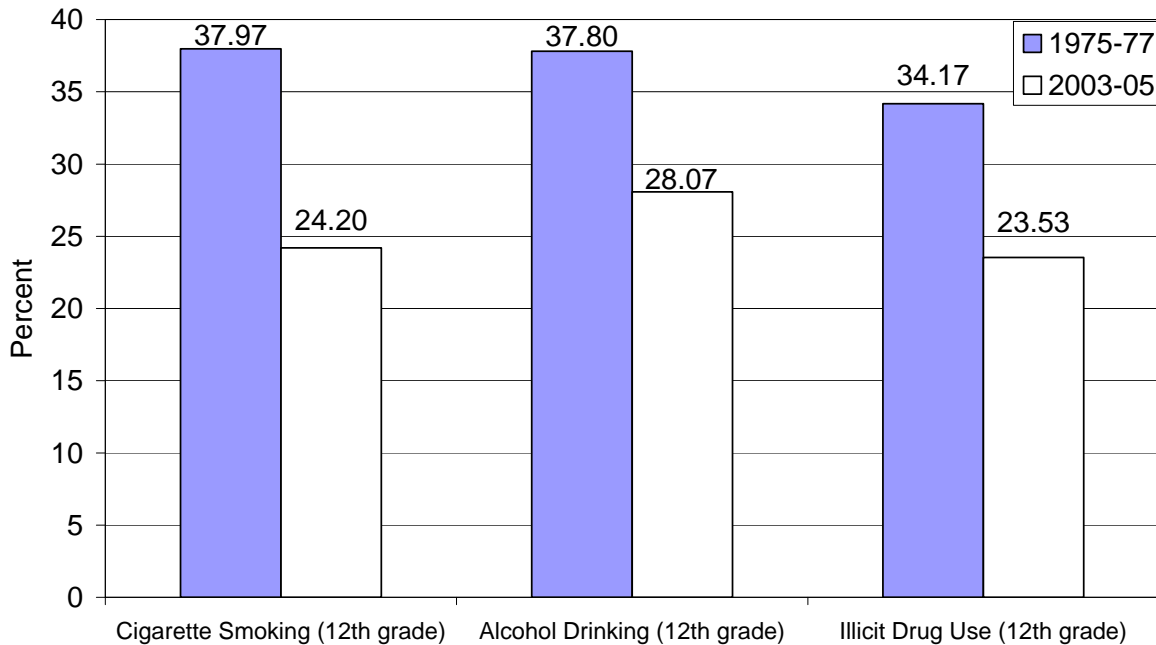


Figure 6 contains bar charts for intergenerational comparisons of three additional safety/behavioral indicators, the percentages of high school 12<sup>th</sup> graders who report that they smoked cigarettes, engaged in binge drinking (five or more alcoholic drinks in one episode), or used illicit drugs (mostly marijuana, but also cocaine, crack, and heroin) in the past 30 days at the time of the High School Senior Surveys in which they participated.

Figure 6. Smoking, Drinking and Illicit Drug Use Rate for the Years 1975-1977 and 2003-2005



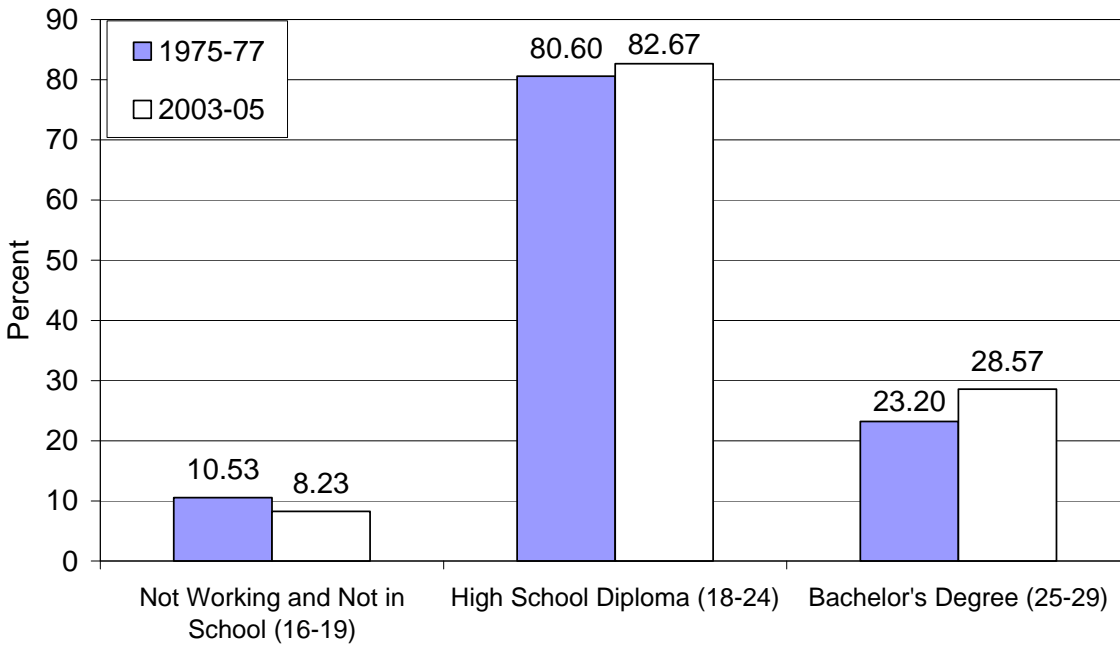
Consistent with the declines in Figure 5, the indicators in Figure 6 also show substantial intergenerational declines. Cigarette smoking decreased from 37.97 percent in 1975-77 to 24.2 percent in 2003-05, a 36.3 percent decline. Binge drinking decreased from 37.8 to 28.07 percent, a 25.7 percent decline. And illicit drug use decreased from 34.17 to 23.53 percent, a 31.1 percent decline.

All in all, these safety/behavioral indicators show remarkable intergenerational declines. Again, there are many sources of these declines, including parental monitoring, changes in lifestyles and time uses of adolescents, activist community groups, and policies of school, police and other official agencies.

### Community Connectedness

The objective of our Key Indicators of Community Connectedness is to measure trends in the participation of adolescents in schooling and economic institutions. Figure 7 shows bar charts for intergenerational comparisons of three community connectedness indicators, namely, the percent of adolescents ages 16-19 not working and not enrolled in school, the high school graduation rate (measured at ages 18 to 24 in order to include those who receive a diploma or GED certificate beyond ages 17-18), and the college graduation rate (measured at ages 25-29 in order to include those who receive a Bachelor’s degree beyond age 22).

Figure 7. Not Working and Not in School, High School Graduate Rate, and Bachelor's Degree Rate for the Years 1975-1977 and 2003-2005

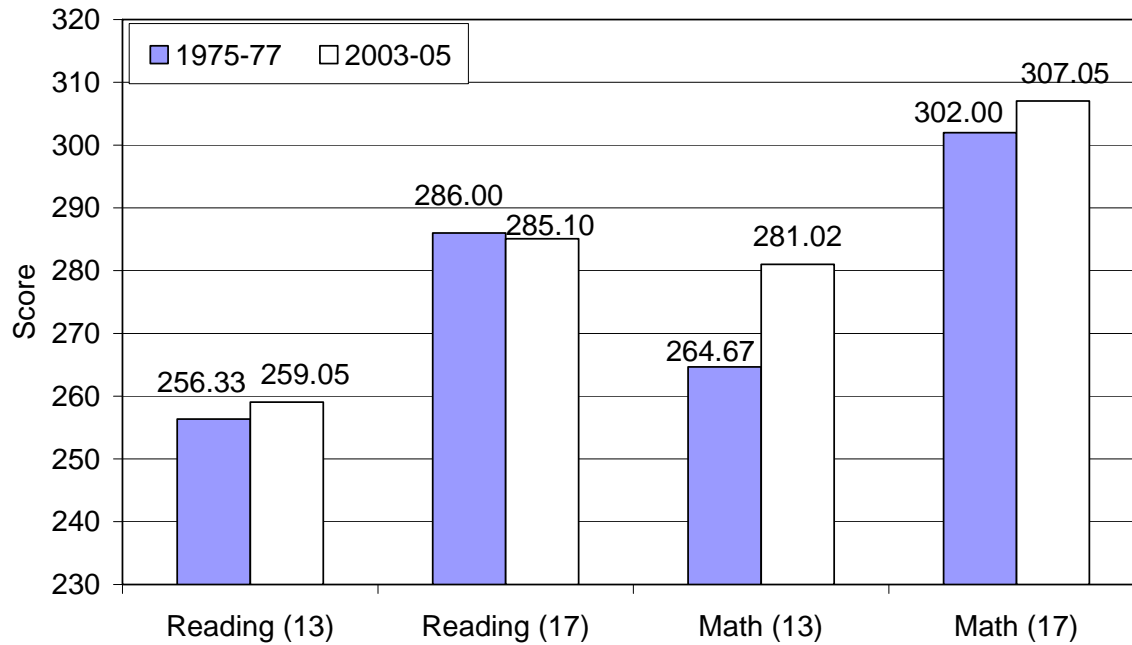


The story on these three indicators of participation in mainstream social institutions is one of intergenerational improvements. Specifically, the percent of youth ages 16-19 not working and not enrolled in school decreased from 10.53 percent in 1975-77 to 8.23 percent in 2003-05, a decline of 21.8 percent. The high school graduation/diploma percent increased more modestly from 80.6 to 82.67 percent, a 2.56 percent improvement. By comparison, the college graduation rate increased from 23.2 to 28.57 percent, a 23.1 percent improvement.

**Educational Attainment Indicators—Test Scores**

In addition to graduation rates, the CWI includes test score indicator of attainments on standardized test of reading and mathematics abilities, as measured by the National Assessment of Educational Progress since 1975. Figure 8 contains bar charts for intergenerational comparisons of these two test scores at ages 13 and 17. These show approximately stability of attainments on the reading tests and slight improvements on the mathematics tests, especially at age 13.

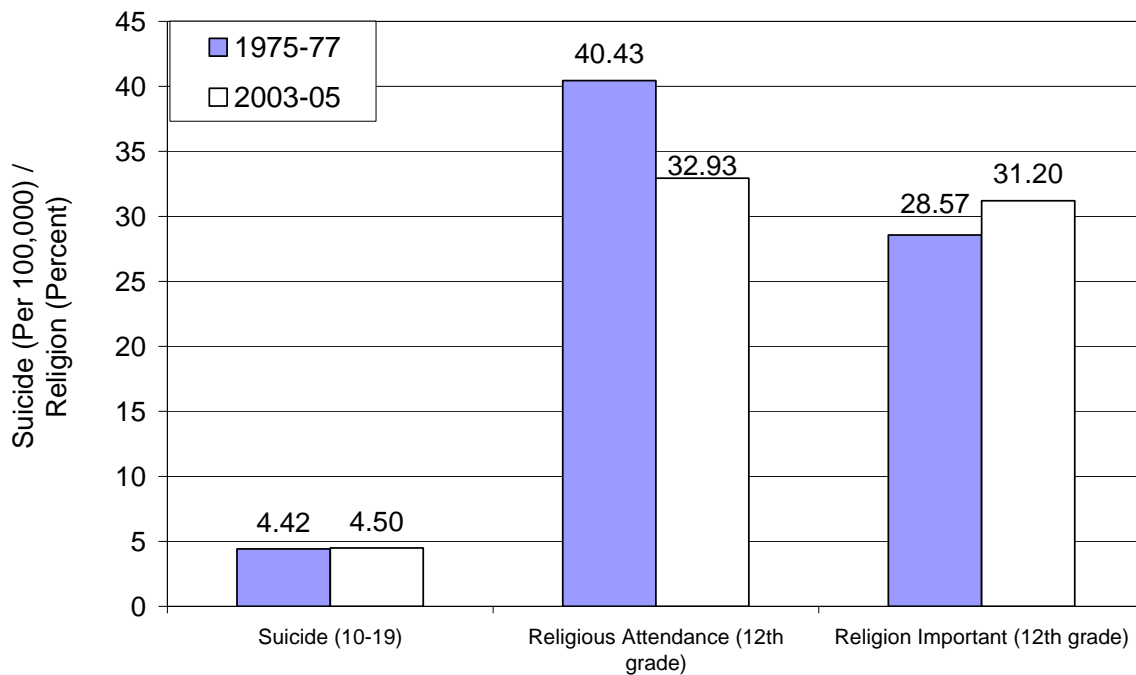
Figure 8. Reading and Math Score (Ages 13 and 17) for the Years 1975-1977 and 2003-2005



### Emotional/Spiritual Indicators

Figure 9 displays bar charts for intergenerational comparisons of three emotional/spiritual well-being indicators: the suicide rate per 100,000 for ages 10-19, the percent of 12<sup>th</sup> graders in the High School Senior Survey who report weekly attendance at religious ceremonies, and the percent who report that religion is very important.

Figure 9. Suicide Rate, Religious Attendance Rate and Religion Important Rate for the Years 1975-1977 and 2003-2005



In brief, the bar charts in Figure 9 show approximate intergenerational stability in the suicide rate for adolescents, an 18.5 percent decline in weekly religious attendance that is counterbalanced by a 9.2 percent increase in the percent of 12<sup>th</sup> graders who regard religion as important.

**Do Intergenerational Changes in Adolescent Well-Being Indicators from the Baby Boomers to the Echo Boomers Represent an Instance of “Do as I Say, Not as I Did” on the Part of Parents and Society?**

These intergenerational comparisons show that Echo Boomer adolescents in the early 21<sup>st</sup> century as compared to their Baby Boomer parents were:

- ✓ slightly more likely to live in families below the poverty line, and
- ✓ had test scores on reading and mathematics that are only slightly higher than those of their parents.

On the other hand, they were:

- ✓ at much lower risk of death from accidents, violence, or disease,
- ✓ but also substantially more likely to be overweight or obese, with associated health problems and risks.

At the same time, they were:

- ✓ much less likely to participate in risky behavior (bear children, be victims of violent crime or violent crime offenders, and smoke cigarettes, binge drink, or consume illicit drugs) than their parents, and
- ✓ more likely to participate in school and economic institutions.

So what is going on? These intergenerational indicator trends are consistent with a generation of parents who saw up close the risky behaviors of their cohorts when they themselves were adolescents. They also witnessed the excesses of these behaviors in the teenage childbearing, violent crime victimization and participation, and drug use levels of the late-1970s and early-1980s. Many then experienced the improvements in educational levels and living standards of the last two decades and want the same for their children. This, combined with an awareness (some would say an over-awareness) of the very real dangers to which adolescents can fall prey in the Internet and 24/7 news cycle age, has led parents to more closely monitor the behaviors of their adolescent children and to encourage greater levels of participation in conventional social institutions such as higher education, the most extreme form of which has been termed “helicopter parenting.”

At the same time, with the middle-aging of the boomer parents in the 1990s and early-2000s, the entire society became more intolerant of risky, deviant, and antisocial behavior. While there still are numerous incidents of excess behavior in a society as large and diverse as the United States, it is not an exaggeration to say that many of the behaviors that were tolerated or even championed in the 1970s when the boomers themselves were adolescents and young adults simply are not well received or even tolerated at all today.

This intolerance may be limiting in some respects. But, at least in the context of well-being indicators and the CWI, the ultimate outcome is an overall intergenerational improvement in adolescent well-being when comparing adolescents in 2003-2005 with their parents who were adolescents in 1975-1977.

### **How About the 2006-2008 years? Will the Good Trends in Adolescent Well-Being Continue?**

All of the foregoing intergenerational comparisons have used averages of data on the Key Indicators for the years 2003-2005. What is happening more recently? Are the intergenerational improvements in adolescent well-being cited above continuing into the second half of the 2000-2010 decade? Adolescents ages 12-17 in the years 2006-2008 were born in the early- to mid-1990s and thus are late-echo boomers. Generally, it can be expected that their well-being will continue to track with that of their predecessor echo boomers who are a few years older.

There are, however, three portents of possible negative changes in the CWI and the associated trends in child and youth well-being—especially as pertains to the well-being of adolescents—that bear careful monitoring during the second half of the current decade.

First, as noted above in Annual Update part of this report, there are macroeconomic changes since 2005, especially for the years 2007 and 2008 (and likely 2009 as well) that could

adversely affect the well-being of U.S. children and adolescents. It is likely that the macroeconomic problems cited above will negatively impact a number of indicators of Family Economic Well-Being for families with children and adolescents as well as public finances and, through that, publicly financed childcare, health, and education programs. It is noteworthy that the percent of all single-parent (both male- and female-headed) families with incomes beneath the poverty line rose from 32 percent in 2004 to 32.27 percent in 2005 and then to 32.7 in 2006. This corresponds to an increase from 3.92 million single-parent families with incomes below the poverty line in 2004 to 3.95 million in 2005 to 4.08 in 2006. This may be a leading indicator of more general family economic stress during the 2006-2008 period.

Second, there is one Key Indicator of adolescent well-being—teenage childbearing—for which preliminary estimates for 2006 show a deterioration. That is, in contrast to declines in this indicator recorded for the years 1991-2005, this indicator turned up in 2006. Specifically, for the ages 15-17, the number of live births per 1,000 females rose from 21.4 in 2005 (the lowest level since 1991) to 22 in 2006, a three percent increase. Furthermore, this increase was recorded both for non-Hispanic white and African-American teenagers in this age group. Thus, it is not due to an increase of the prevalence of Hispanic females in the aged 15-17 population with possibly different cultural traditions of teenage childbearing.

This combined with recent media attention to a Spring 2008 upturn in pregnancies among high school students in Gloucester, Massachusetts has led some observers to focus on events in the popular culture (movies, pregnant teenage celebrities) as causally related to a potential new wave of teenage childbearing. But is it life imitating art or art imitating life? And public health analysts have noted that deficiencies and cutbacks in sex education programs predate the 2006 upturn in teenage childbearing and thus are more likely the causative factors.

It is not possible, nor is it necessary, for the CWI Project to settle these questions and disputes. Suffice it to say that, while the 2006 upturn in teenage childbearing may have preceded recent changes in the popular culture with respect to attitudes towards teenage sexual activity and pregnancies, it likely also is the case that the changes in the popular culture—now that they have been established—will feed back to positively reinforce this upturn. Moreover, if the current adverse macroeconomic conditions lead to further cutbacks in teenage sex education and pregnancy prevention programs, these various factors could lead to a reversal of the long-term secular downturn in teenage childbearing that could last for several years and thereby negatively impacts adolescent and child well-being.

Third, there may be reversals of trends in other safety/behavioral indicators in the offing as well. The rate of violent crime victimization per 1,000 adolescents ages 12-19 rose from 44.15 in 2005 to 49.8 in 2006. This corresponds to an increase from 1.48 million violent crime victimizations in this age group in 2005 to 1.67 million in 2006. This followed a rise in the rate per 1,000 of violent crime offenders ages 12-17 from 13.6 in 2004 to 17.2 in 2005; an increase in numbers from 344,800 in 2004 to 438,400 in 2005. Illicit drug use among 12<sup>th</sup> graders also ticked up from 21.5 to 21.9 percent.



**Conclusion—Close Monitoring is Warranted**

Taken in isolation, recent changes in each of these Key Indicators might be attended to and studied by experts in family economics, public health and adolescent pregnancy prevention, and delinquency and criminal justice, respectively. The comprehensive, composite view of well-being taken by the CWI, however, leads to cross-walks and comparisons among the various dimensions tapped by the indicators. This analysis of interdependencies and interactions among indicators and dimensions of child and youth well-being alerts us to the possible reversal of decades-long improvements and increases the salience of close monitoring levels and trends in these and other indicators of adolescent well-being during the current period.

## Acknowledgements and Contact Information

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**On the Web:** More information about the CWI, its construction, and the scientific papers and publications on which it is based can be found on the World Wide Web:

<http://www.soc.duke.edu/~cwi/>

## **Appendix A**

### **Methods of Construction and Indicator List for the CWI**

#### **Methods of Construction**

Annual time series data (from vital statistics and sample surveys) were assembled on 28 national-level indicators in seven quality-of-life domains: *Family Economic Well-Being, Health, Safety/Behavioral Concerns, Educational Attainment, Community Connectedness, Social Relationships, and Emotional/Spiritual Well-Being*. These seven domains of quality of life have been well-established as recurring time after time in over three decades of empirical research in numerous subjective well-being studies. They also have been found, in one form or another, in studies of the well-being of children and youths.

To calculate the CWI, each of the time series of the indicators is indexed by a base year (1975). The base year value of the indicator is assigned a value of 100 and subsequent values of the indicator are taken as percentage changes in the CWI. The directions of the indicators are oriented so that a value greater (lesser) than 100 in subsequent years means the social condition measured has improved (deteriorated).

The indexed Key Indicator time series then are grouped into the seven domains of well-being by equal weighting to compute the domain-specific Index values for each year. The seven domain-specific Indices then are grouped into an equally-weighted Child and Youth Well-Being Index value for each year. The CWI Project uses an equal-weighting strategy for constructing its composite indices for two reasons. First, it is the simplest and most transparent strategy and can easily be replicated by others. Second, statistical research done in conjunction with the CWI Project has demonstrated that, in the absence of a clear ordering of the indicators of a composite index by their relative importance to the composite and on which there is a high degree of consensus in the population, an equal weighting strategy is privileged in the sense that it will achieve the greatest level of agreement among the members of the population. In statistical terminology, the equal-weighting method is a *minimax estimator*. See Hagerty Michael R. and Kenneth C. Land 2007 “Constructing Summary Indices of Quality of Life: A Model for the Effect of Heterogeneous Importance Weights,” *Sociological Methods and Research*, 35(May):455-496.

Since it builds on the subjective well-being empirical research base in its identification of domains of well-being to be measured and the assignment of indicators to the domains, the CWI can be viewed as *well-being-evidence-based measures of trends in averages of the social conditions encountered by children and youth in the United States across recent decades*.

**Table A-1. Twenty-Eight Key National Indicators of Child and Youth Well-Being in the United States.**

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*Family Economic Well-Being Domain*

5. Poverty Rate (All Families with Children)
6. Secure Parental Employment Rate
7. Median Annual Income (All Families with Children)
8. Rate of Children with Health Insurance

*Health Domain*

7. Infant Mortality Rate
8. Low Birth Weight Rate
9. Mortality Rate (Ages 1-19)
10. Rate of Children with Very Good or Excellent Health (as reported by parents)
11. Rate of Children with Activity Limitations (as reported by parents)
12. Rate of Overweight Children and Adolescents (Ages 6-19)

*Safety/Behavioral Domain*

7. Teenage Birth Rate (Ages 10-17)
8. Rate of Violent Crime Victimization (Ages 12-19)
9. Rate of Violent Crime Offenders (Ages 12-17)
10. Rate of Cigarette Smoking (Grade 12)
11. Rate of Alcohol Drinking (Grade 12)
12. Rate of Illicit Drug Use (Grade 12)

*Educational Attainment Domain*

3. Reading Test Scores (Ages 9, 13, and 17)
4. Mathematics Test Scores (Ages 9, 13, and 17)

*Community Connectedness*

6. Rate of Persons who have Received a High School Diploma (Ages 18-24)
7. Rate of Youths Not Working and Not in School (Ages 16-19)
8. Rate of Pre-Kindergarten Enrollment (Ages 3-4)
9. Rate of Persons who have Received a Bachelor's Degree (Ages 25-29)
10. Rate of Voting in Presidential Elections (Ages 18-20)

*Social Relationships Domain*

3. Rate of Children in Families Headed by a Single Parent
4. Rate of Children who have Moved within the Last Year (Ages 1-18)

*Emotional/Spiritual Well-Being Domain:*

4. Suicide Rate (Ages 10-19)
5. Rate of Weekly Religious Attendance (Grade 12)
6. Percent who report Religion as Being Very Important (Grade 12)

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Note: Unless otherwise noted, indicators refer to children ages 0-17.

## Appendix B

### Sources of Data for the CWI

Child Poverty	US Bureau of the Census, March Population Survey, Current Population Reports, Consumer Income, Series P-60, Washington, D.C.: US Bureau of the Census. <a href="http://www.census.gov/hhes/www/poverty/histpov/hstpov3.html">http://www.census.gov/hhes/www/poverty/histpov/hstpov3.html</a> 1975-present
Secure Parental Employment	US Bureau of the Census, March Current Population Survey, Washington, D.C.: US Bureau of the Census. Available from Forum on Child and Family Statistics, <a href="http://childstats.ed.gov/americaschildren/tables/econ2.asp">http://childstats.ed.gov/americaschildren/tables/econ2.asp</a> 1980-present. Special tabulation from CPS CD 1975-1979.
Median Annual Income	US Bureau of the Census, March Current Population Survey, Historical Income Tables – Families, Washington, D.C.: US Bureau of the Census. <a href="http://www.census.gov/hhes/www/income/histinc/f10ar.html">http://www.census.gov/hhes/www/income/histinc/f10ar.html</a> 1975-present.
Health Insurance	US Bureau of the Census, Housing and Household Economic Statistics Division, unpublished tabulations from the March Current Populations Surveys, Washington, DC: US Bureau of the Census. Special tabulation by Federal Intra-agency Forum <a href="http://www.census.gov/hhes/www/hlthins/historic/hihist3.html">http://www.census.gov/hhes/www/hlthins/historic/hihist3.html</a> 1987–present.
Infant Mortality	CDC, National Center for Health Statistics, National Vital Statistics System, Monthly Vital Statistics Report (v25-v46), National Vital Statistics Report (v47-v49): Hyattsville, MD: NCHS. <a href="http://www.cdc.gov/nchs/data/nvsr/nvsr56/nvsr56_16.pdf">http://www.cdc.gov/nchs/data/nvsr/nvsr56/nvsr56_16.pdf</a> 1975-present.
Low Birth Weight	CDC, National Center for Health Statistics, National Vital Statistics System, Report of Final Natality Statistics, Monthly Vital Statistics Reports (1975-1996), National Vital Statistics Reports (1997-present). Hyattsville, MD: NCHS. <a href="http://www.cdc.gov/nchs/data/nvsr/nvsr56/nvsr56_07.pdf">http://www.cdc.gov/nchs/data/nvsr/nvsr56/nvsr56_07.pdf</a>
Child and Adolescent Mortality	CDC, National Center for Health Statistics, National Vital Statistics System, Leading Causes of Death. <a href="http://www.cdc.gov/nchs/data/nvsr/nvsr56/nvsr56_16.pdf">http://www.cdc.gov/nchs/data/nvsr/nvsr56/nvsr56_16.pdf</a> 1975–present.
Subjective Health and Activity Limitations	CDC, National Center for Health Statistics, National Health Interview Survey, Hyattsville, MD: National Center for Health Statistics. <a href="http://www.cdc.gov/nchs">www.cdc.gov/nchs</a> Available from Forum on Child and Family Statistics, <a href="http://www.childstats.gov/">http://www.childstats.gov/</a> 1984–present.
Obesity	CDC, National Center for Health Statistics, Health United States, 2003 and National Health and Nutrition Examination Survey (NHANES), Hyattsville, MD. <a href="http://www.cdc.gov/nchs/data/hus/tables/2003/03hus069.pdf">www.cdc.gov/nchs/data/hus/tables/2003/03hus069.pdf</a> 1975-present.
Teen Births	CDC, National Center for Health Statistics, National Vital Statistics System. Monthly Vital Statistics Reports (1975-1996), National Vital Statistics Reports (1997-present). Hyattsville, MD: National Center for Health Statistics. <a href="http://www.cdc.gov/nchs/data/nvsr/nvsr56/nvsr56_07.pdf">http://www.cdc.gov/nchs/data/nvsr/nvsr56/nvsr56_07.pdf</a>
Crime Victimization	US Department of Justice, Bureau of Justice Statistics, National Crime Victimization Survey and FBI Supplementary Homicide Reports. Available from Sourcebook of Criminal Justice Statistics Online, <a href="http://www.albany.edu/sourcebook/pdf/t342006.pdf">http://www.albany.edu/sourcebook/pdf/t342006.pdf</a> 1975-present.
Violent Crime Offenders	US Department of Justice, Bureau of Justice Statistics, National Crime Victimization Survey. <a href="http://www.ojp.usdoj.gov/bjs/">http://www.ojp.usdoj.gov/bjs/</a> 1975-present.
Smoking, Drinking, and Drugs	The Monitoring the Future Study, Institute for Social Research, University of Michigan: Ann Arbor, MI. <a href="http://www.monitoringthefuture.org/data/data.html">www.monitoringthefuture.org/data/data.html</a> , 1975-present.
Reading and Mathematics Scores	US Department of Education Statistics, National Assessment of Education Progress (NAEP). <a href="http://nces.ed.gov/nationsreportcard">http://nces.ed.gov/nationsreportcard</a> 1975-present.
High School Completion	US Bureau of the Census, October Current Population Surveys, Washington, D.C.: US Bureau of the Census. <a href="http://www.census.gov/population/socdemo/school/TableA-5a.xls">http://www.census.gov/population/socdemo/school/TableA-5a.xls</a> 1975-present.
Not Working and Not in School	US Bureau of Labor Statistics, Current Population Surveys, Washington, D.C.: US Bureau of the Census. Available from Forum on Child and Family Statistics, <a href="http://www.childstats.gov/">http://www.childstats.gov/</a> 1985-present. Special tabulation from CPS CD, 1975-1984.
Preschool	US Department of Education, National Center for Education Statistics, Digest of Education

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Enrollment	Statistics and Bureau of the Census, Current Population Survey. <a href="http://www.nces.ed.gov/programs/digest/d07/tables/dt07_006.asp">http://www.nces.ed.gov/programs/digest/d07/tables/dt07_006.asp</a> , 1980-present, interpolated years 1976-1979.
Bachelor's Degree	US Department of Education, National Center for Education Statistics, Condition of Education <a href="http://nces.ed.gov/programs/coe/2007/section3/table.asp?tableID=713">http://nces.ed.gov/programs/coe/2007/section3/table.asp?tableID=713</a> , 1975-present.
Voting in Presidential Elections	US Bureau of the Census, Current Population Reports, Series P-20, Voting and Registration, Washington, D.C.: US Bureau of the Census <a href="http://www.census.gov/population/www/socdemo/voting/cps2004.html">http://www.census.gov/population/www/socdemo/voting/cps2004.html</a> 1975-present.
Single Parent Families	US Bureau of the Census, Current Population Reports, Marital Status and Living Arrangements, Annual Reports. <a href="http://www.census.gov/population/socdemo/hh-fam/ch1.pdf">http://www.census.gov/population/socdemo/hh-fam/ch1.pdf</a> 1975-present.
Residential Mobility	US Bureau of the Census, Series P-20, Geographic Mobility, Washington, D.C.: US Bureau of the Census. <a href="http://www.census.gov/population/www/socdemo/migrate.html">http://www.census.gov/population/www/socdemo/migrate.html</a> 1975-present.
Suicide	CDC, National Center for Health Statistics, National Vital Statistics System. <a href="http://www.cdc.gov/nchs/datawh/statab/unpubd/mortabs.htm">www.cdc.gov/nchs/datawh/statab/unpubd/mortabs.htm</a> 1975-present.
Church Attendance and Importance	The Monitoring the Future Study, Institute for Social Research, University of Michigan: Ann Arbor, MI. <a href="http://www.monitoringthefuture.org/">http://www.monitoringthefuture.org/</a> 1975-present.

**Appendix C**  
**Child and Youth Well-Being Index Values, 1975-2006,**  
**with Projections for 2007.**

<b>Year</b>	<b>CWI</b>	<b>Change in CWI</b>
1975	100.00	0.00
1976	100.75	0.75
1977	98.93	-1.82
1978	99.37	0.44
1979	100.09	0.71
1980	99.71	-0.38
1981	97.48	-2.23
1982	96.13	-1.35
1983	96.65	0.52
1984	96.54	-0.11
1985	94.03	-2.51
1986	95.25	1.22
1987	94.07	-1.18
1988	94.08	0.01
1989	94.61	0.53
1990	94.15	-0.46
1991	93.06	-1.09
1992	92.93	-0.13
1993	91.53	-1.40
1994	91.37	-0.16
1995	93.20	1.83
1996	93.83	0.63
1997	94.22	0.40
1998	96.83	2.61
1999	99.24	2.41
2000	100.96	1.71
2001	101.04	0.08
2002	102.17	1.14
2003	101.24	-0.93
2004	101.48	0.24
2005	102.36	0.88
2006*	102.50	0.14
2007**	102.95	0.45

\*As of release date, 8 Key Indicators were projected for 2006.

\*\*All except 2 Key Indicators were projected for 2007.

### **A Note on the Accuracy of CWI Projections**

The values of several of the time series of the 28 Key Indicators (particularly in Health) in the CWI tend to be published with lags of two to three years behind the current calendar year. In order to provide updated values that can be used for calculating the CWI for the most recent two years, the Project accordingly has estimated statistical time series models for those time series that lag in publication. Since these time series tend to be relatively slowly moving, it has been found that the resulting projected values are fairly accurate and produce overall CWI values that also are relatively accurate. Some recent comparisons:

- In the 2005 CWI Report, we projected an increase of 0.63 in the Index from 2003 to 2004. This compares to an observed increase of 0.24.
- In the 2006 CWI Report, we projected an increase of 0.76 in the Index from 2004 to 2005. This compares to an observed increase of 0.88.
- In the 2007 CWI Report, we projected an increase of 0.01 in the Index from 2005 to 2006. This compares to an observed increase of 0.14 (this initial estimate is subject to revision as the final values for all Key Indicators for 2005 are posted).

Because of lags in the availability of Key Indicators series (particularly in Health) and occasional revisions of previously published data points, it is not expected that our projected values will be completely accurate. However, the projections have been fairly close to the real data series.