

## *Appendix A*

# Sources, Methods, and Separating Cohorts and Time Periods

Most of the data in this book come from four sources, all of which are publicly available online:

1. The Monitoring the Future (MtF) Survey of 8th, 10th, and 12th graders (administered by the Institute for Social Research at the University of Michigan, and funded by the National Institute on Drug Abuse, part of the US Department of Health and Human Services). The 12th-grade survey has been done every year since 1976, 8th and 10th grades since 1991. The total number of survey participants is approximately 1.4 million.
2. The Youth Risk Behavior Surveillance System (YRBSS) of 9th, 10th, 11th, and 12th graders (administered by the Centers for Disease Control and Prevention). Every other year since 1991. Total number of survey participants is approximately 175,000.
3. The American Freshman Survey of entering college students (administered by the Higher Education Research Institute at UCLA and funded by the college campuses that participate). Every year since 1966. Total number of survey participants is approximately 10 million.
4. The General Social Survey (GSS) of adults 18 and over (administered by the National Opinion Research Center at the University of Chicago and funded by the National Science Foundation). Every year or every other year since 1972. Total number of survey participants is approximately 60,000.

These surveys are nationally representative, meaning that their administrators take careful steps to make sure that the sample represents the US population as a whole (for the GSS) or the population of high school students as a whole (for MtF and the YRBSS). The AF college survey includes those who enroll as first-time freshmen at four-year colleges and universities, with the data weighted to be nationally representative of that population.

These surveys have another big advantage: High response rates, meaning that the majority, and usually the vast majority, of the people asked to participate in the survey said yes. Response rates for MtF hover around 80%; for the YRBSS at 86%; and the GSS at 70%. The American Freshman survey includes data from campuses only if their response rate is 65% or greater.

This is important: if a survey has a low response rate, it might not represent the population. Some have speculated that this is what occurred with the polls for the 2016 election: Response rates for telephone polls dropped from 36% in 1997 to 8% in 2014 and might have been even lower in 2016. Those who didn't pick up the phone, or who hung up once they realized it was a poll, might have been a different type of person from those who answered the poll questions. That may have been one of the reasons why the polls did not predict Trump's win in several key states. The response rates for these surveys are about ten times as high as those of the 2014 phone polls, so the risks of their results being off by a few percentage points are less likely. With captive audiences in schools and at colleges, these surveys reach a much larger percentage of the population with much lower refusal rates. Even the GSS of adults gets a response rate eight times as high as phone polls (probably because it follows up extensively with possible respondents and administers most interviews in person).

Many of the topics explored in this book appeared in more than one of these surveys and often across several questions worded in different ways or asking about different aspects of time use or behavior—and the results are almost always the same. In some cases, the trends that show up on these surveys also appear in behaviors measured in different ways—for example, the Bureau of Labor Statistics' data on employment rates, or Centers for Disease Control and Prevention data on suicide rates.

Nearly all of the figures and conclusions in the book are based on these surveys, the best data available to capture cultural change. Of course, the data available online are in data files—incredibly long and detailed columns of thousands of variables and rows of hundreds of thousands of survey participants. Like any researcher, I had to make some decisions about how to present the data.

### Means or Percentages?

First, I decided to focus primarily on percentages, as they are easier to comprehend immediately than means based on scales. For example, many of the survey items here used a 1-to-5 scale, with 1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, and 5 = strongly agree. Instead of showing the mean response (which might be something like 3.75 for an item most people agreed with), I instead show the percentage of people who agreed (the combined percentage of those who answered “agree” or “strongly agree,” say, 56%). I did the same with items on time use, which also used 1-to-5 scales (usually ranging from “never” to “nearly every day”). Here I used either the percentage who said they did an activity “nearly every day” or those who chose “once a week or more” or “nearly every day.” This seemed more readily comprehensible than the mean on a 1-to-5 scale, where it’s necessary to recall what each number represents.

The downside of percentages is that some of the variance in the data is lost. Focusing on the percentage who agree doesn’t allow a view of whether the change was focused on those who disagreed or those who chose the neutral response of “neither agree nor disagree,” while means capture this possibility. I found, though, that the trends looked extremely similar when graphed as means and when graphed as percentages. For example, consider the use of print media among 8th and 10th graders. Here is the graph using means:

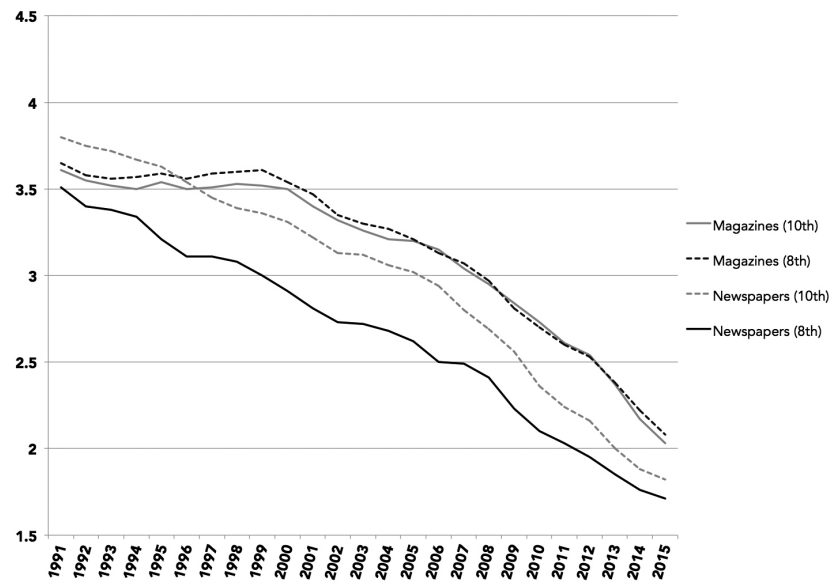


Figure A.1. 8th and 10th graders’ print media use, 1–5 scale. *Monitoring the Future, 1991–2015.*

And the graph using percentages:

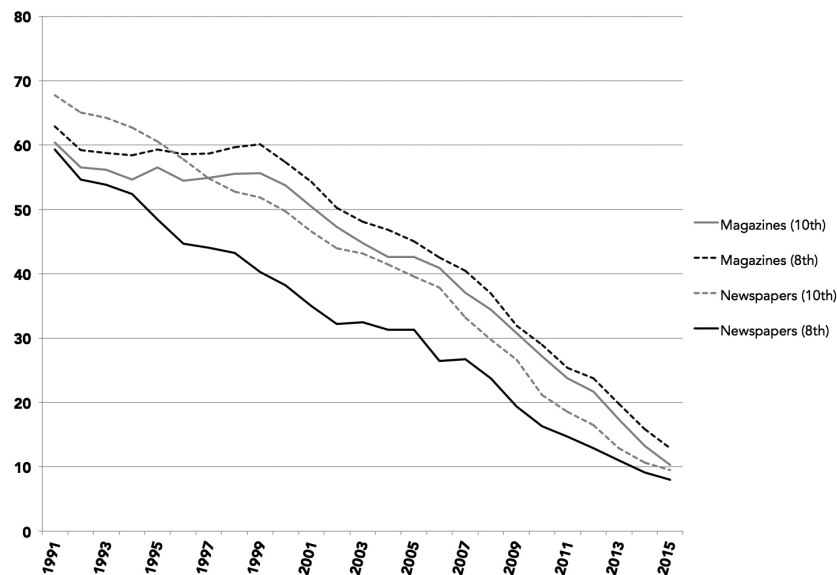


Figure A.2. 8th and 10th graders' print media use, percentage using once a week or more. Monitoring the Future, 1991–2015.

The graphs for the MtF, the YRBSS, and American Freshman data all show the raw average percentages from those years. These data sets survey between 2,000 and 200,000 people on each item every year, so the percentages are fairly reliable. Given the large sample sizes, I didn't think it was necessary to include error bars, which would be very narrow.

A few items of interest (for example, belief in God) were not asked on the three very large surveys, so I present data from 18- to 24-year-olds in the GSS. The smaller sample size meant that error bars might have been useful, but I chose not to include them as they would have made the graph more difficult to read. The span of 18 to 24 also has issues, since in 2016 that included those born in 1992 to 1998, most of whom are late Millennials rather than iGen'ers per se. Overall, the GSS data on 18- to 24-year-olds should be considered weaker evidence for iGen'ers' behavior than the other three surveys, which is why I present it only when the other three do not include an item measuring the same thing. That said, the GSS is the longest ongoing survey of US adults and is arguably the most respected over-time survey in social science. One other note: the figures and analyses in the book exclude the black oversamples in the 1982 and 1987 GSS and are weighted by the suggested weighting variable (WTSALL) to make the sample representative of individuals rather than households.

When discussing the results in the text, I'll sometimes refer to how large the change is—for example, if something goes from 10% to 20%, I'll note that it doubled. When the shifts are less pronounced than that, I sometimes note the percentage increase—not the percentage *points* but the increase in terms of numbers. For example, an increase in agreement from 10% to 15% is a 50% increase, because it means 50% more people agree ( $15 - 10 = 5$ , and  $5/10 = .50$ , or 50%). This is more informative than noting the number of percentage points (here, 5), which doesn't tell us much about the change in terms of people.

### Age, Time Period, and Cohort

In most of the analyses, I use these four data sets as time-lag studies, comparing people of the same age at different points in time. That means the differences cannot be due to age, as age is the same for everyone. For example, in the MtF 12th-grade survey the Boomers filling out the surveys in 1976 were 17- and 18-year-old high school seniors, and so were the GenX'ers filling them out in 1990, the Millennials in 2005, and the iGen'ers in 2015. Because these surveys have collected data over many decades, they can rule out effects of age, which is extremely helpful for drawing conclusions about what is cultural change and what is just being young.

However, these types of data cannot separate the effects of generation (a change that affects only young people) from those of time period (a change that affects people of all ages equally). It could be that everyone, even older adults, is changing, not just young people. Nevertheless, both generation and time period capture cultural change—differences in behavior and attitudes over time. Separating the influences of age, generation, and time period is difficult, because each is the product of the other two. For example, if you will be 20 in 2020, you were born in 2000.

I'll make two points about this issue. First, practically speaking, it might not always matter much whether a change is due to generation or time period, because both indicate cultural change. The increase in smartphone use is a good example. When smartphones entered the scene in 2007, people of all ages started using them (a time-period effect), though young people adopted them more quickly than older people (a generational effect). Either way, teens were spending a lot of time on something during their formative years that older people had not experienced when they were teens. Everyone in the culture was experiencing the same technological shifts, but that doesn't negate the profound shift in time use among teens from the 1990s to the 2010s. The same is true for teens' spending time with their friends in person—this might be true for adults as well, but it doesn't disprove the fact that iGen teens are getting much less face time with their friends than their parents did as teens—or even than Millennials did ten years ago.

Second, sophisticated statistical techniques can now separate age, generation, and time period, so we can at least start to answer these questions. These techniques can be used only on data sets that include people of different ages over many years, such as the General Social Survey (GSS) of adults over 18. They can't be used on the surveys of teens, since those don't vary enough in age.

My journal article coauthors Ryne Sherman (of Texas Tech University) and Nathan Carter (of the University of Georgia), both experts in advanced multivariate statistics, performed analyses on the GSS data using these new techniques (called APC or age-period-cohort analysis, it is based on hierarchical linear modeling. Cohort is another term for generation). Overall, the analyses suggested that attitude shifts—for example, more positive attitudes toward gays and lesbians—were often driven by time period. Changes in behaviors—such as sexual behavior—were often due to generation. Other changes were due to both.

Here's an example, using some of the research on changes in religious beliefs and practices presented in chapter 5. The source is the GSS survey, which has been administered every year or every other year from 1972 to 2016. The figures show the time-period and generational effects (controlled for each other and both controlled for age) on public religious commitment (which adds together going to religious services, affiliating with a religion, strength of religious affiliation, and confidence in religious institutions). They're standardized so that the mean is 0 and the standard deviation is 1.

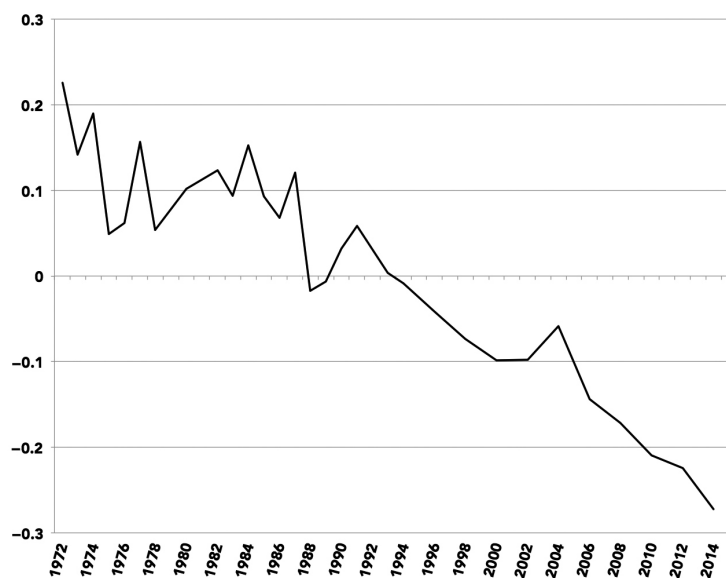


Figure A.3. American adults' public religious commitment, time-period effect, controlling for cohort/generation and age in an APC analysis. General Social Survey, 1972–2014.

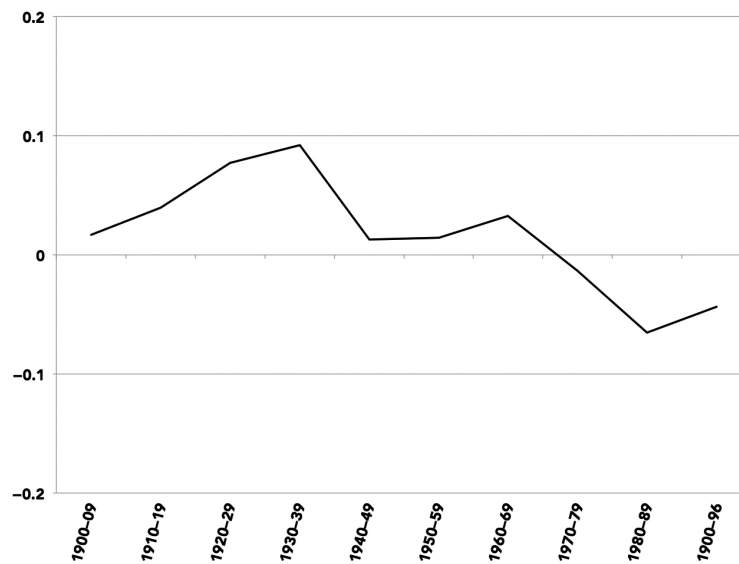


Figure A.4. American adults' public religious commitment, cohort/generational effect, controlling for time period and age in an APC analysis. General Social Survey, 1972–2014.

As you can see, these analyses showed both a time-period and a cohort/generational effect for declines in public religious commitment, with the time-period effect about twice as big. In other words, two things were going on: American adults of all ages were growing less religious over time, and later generations were less religious than previous ones.

We've done APC analyses on only a minority of the characteristics I explore in this book, so I have not made them a central focus. Age is always constant in the figures showing yearly change, so that influence is already removed. But it should also be kept in mind that many of these changes have probably affected older people, too.

### Weighting, Moving Averages, Relative Centrality, and Relative Risk

Most of the time, the numbers in the figures are unadjusted; they're simply the average percentage or mean for that year in that population, straight from the data file. Sometimes, though, they've been adjusted to represent the population more clearly. Nearly all of these adjustments move the results by a percentage point or two, not enough to make much of a difference. For example, the surveys all have weight variables that can make the statistics more representative of the population in terms of demographic composition. Most of the time, using a weight vs. not doing so barely budges the results, so I've chosen to present most of the results, including those for Monitoring the Future, without them. The American Freshman data are reported already weighted—important for that survey, as colleges choose to participate and are thus not random; weighting makes the results representative of the population entering four-year colleges and universities for the first time. The General Social Survey samples only one person per household. That means that someone who lives alone is more likely to be in the survey than someone who lives with many people. That makes a difference, particularly for variables concerning religion or politics. For that reason, the GSS results presented here are weighted to correct for this.

Another question is moving averages, which smooth year-by-year data so the general pattern of change can be seen more easily (they are often used in stock market graphs). Most of the figures here do not use moving averages—it's sometimes interesting to see the ups and downs at individual years, and the large sample sizes of most of the surveys make the numbers reliable even within years. I have employed moving averages in two types of cases. First, the GSS, which is the only survey of adults and the only one asking some questions, samples only about 2,500 people per year (compared to about 15,000 for Monitoring the Future and about 200,000 for the American Freshman Survey). Since this book is about young people, that 2,500

is cut down further when you look at 18- to 29-year-olds or 18- to 24-year-olds. The sample sizes are still adequate, usually at least two hundred people per year, but the numbers fluctuate more because the sample sizes are lower. So some of the figures based on GSS data from young people use only moving averages, and therefore it's easier to see the general trends. Second, I used moving averages for one MtF graph—the one on happiness, as that variable shows some ups and downs over time that get in the way of seeing the general trends. The figure with the unadjusted percentages looks similar, just messier.

For the questions on what teens think is important in life (mostly in chapter 6), most figures are adjusted for a curious generational tic: recent generations are more likely to rate everything as more important. Researchers who study values, such as Tim Kasser of Knox College, recommend subtracting the average of all of the values items from each. That adjusts for some people's tendency to rate everything as important and others' to rate few things as important. The adjusted numbers therefore capture how important someone thinks the value is relative to other values—thus the term *relative centrality*. Compared to the adjustments for weighting and moving averages, these corrections make more of a difference. Without them, for example, iGen high school seniors appear to value meaning and purpose in life more than Boomers did, but with the correction they value them less.

Last, I decided to present data on the relationship between variables (such as in chapter 3) using relative risk instead of correlations. As a psychologist, I usually use correlations, a statistic that tells you the relationship between two continuous variables. Correlations can be positive (between 0 and 1) or negative (between -1 and 0). For example, temperature and ice cream sales are positively correlated (as one goes up, so does the other); temperature and articles of clothing worn are negatively correlated (as one goes up, the other goes down). However, correlations aren't particularly intuitive—what does it actually mean for people if two things are correlated .20?—and even within the field there's a lot of debate about how big a correlation needs to be to “matter.”

Relative risk, often used in medical journals, instead tells you the increased (or decreased) chance of one thing happening given another thing. So, for example, a study might find that the relative risk for a poor diet on heart disease is 1.30, meaning that people who have a poor diet are 30% more likely to get heart disease. A relative risk of 1 is even chances, meaning the exposure doesn't make a difference in the outcome. But what do you do when something has a protective effect—say, if people who exercise are less likely to get heart disease? Usually, negative relative risk is expressed as numbers lower than 1—for example, a relative risk of .70 for the effect of exercise on heart disease means that you're 30% less likely to get heart disease if you exercise. It requires some math to arrive at this conclusion, however, so I have modified relative risk in the tables so that even chances are instead at 0. Continuing our example, that means the relative risk of a poor diet would appear as .30 and the relative risk of exercise as -.30. (This technique combines the features of relative risk and correlation.) That works very well for relative risks below 99%. It becomes a little more complex for relative risks over 2—on those charts, a doubling of risk will appear as 1 (corresponding to a 100% increase).

There are two downsides to relative risk compared to correlations. First, relative risk uses dichotomous variables (those with only two outcomes, like percentages), so you lose some of the variation in responses that are better captured with correlations. Here that's not too much of a problem since the correlations and the relative risk percentages point in the same direction and are similar in size. Second, relative risk is difficult to use when outside factors need to be controlled for. For those analyses, I instead used odds ratios, which are not as intuitive, though they are related to relative risk. Those analyses are reported in the text but are not shown in the charts. However, I thought that relative risk was still the better way to convey the effects of activities on happiness and mental health—for example, is a heavy user of social media more or less likely to be unhappy than a lighter user?

Overall, these judgment calls on method made very small differences in the size of effects, and none of them changes the overall conclusions. If you're interested in seeing more of the details, the papers on which these analyses are based are listed in the Notes.

*Appendix B*

**Chapter 1 Extra Stuff**

**Going Out Without Parents**

The decline in going out without parents appears across all groups; here are the breakdowns by race and socioeconomic status.



Figure B.1. Going out without parents, times per week, 12th graders, by race/ethnicity. Monitoring the Future, 1976–2015.

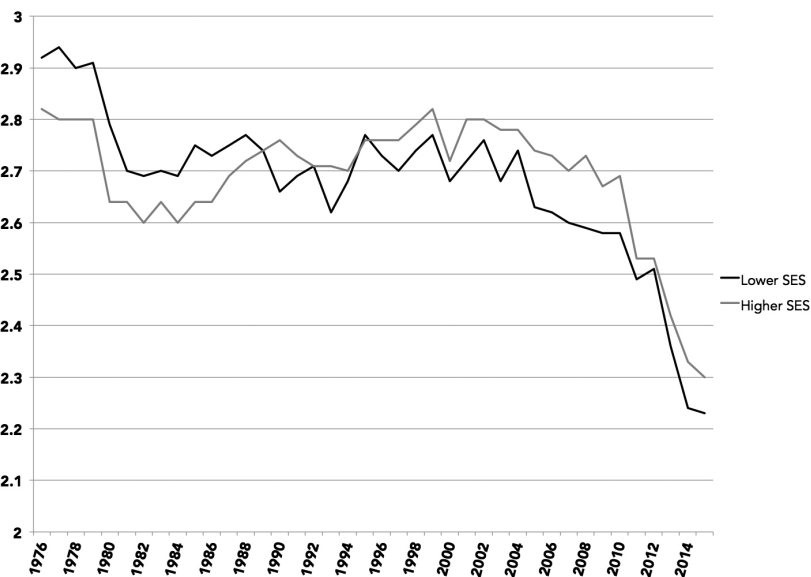


Figure B.2. Going out without parents, times per week, 12th graders, by socioeconomic status (father's education). Monitoring the Future, 1976–2015.

### Dating

The decline in going out on dates was more pronounced for girls than for boys. Whereas girls once went out on dates more often than boys, now there is no difference by sex.

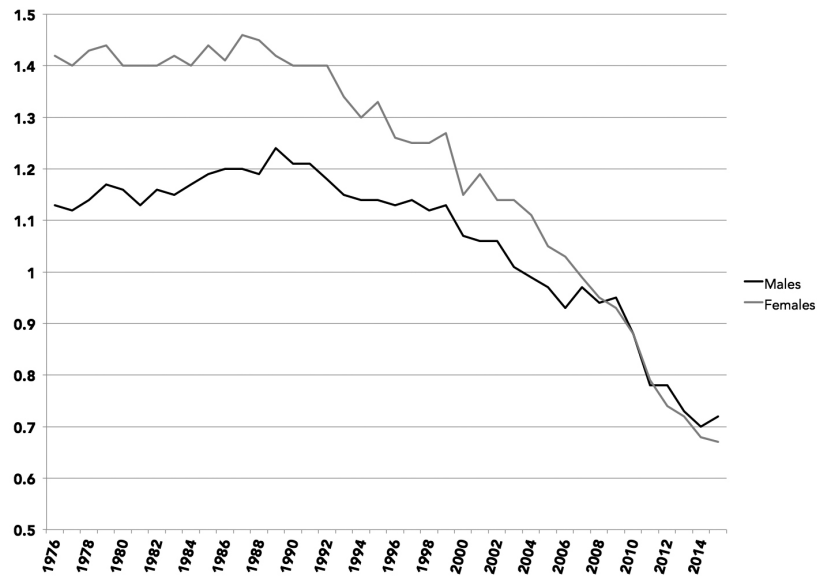


Figure B.3. Going on dates, times per week, by sex, 12th graders. Monitoring the Future, 1976–2015.

### Driving

The decline in 12th graders getting a driver’s license appears among teens living in rural, suburban, and urban areas. This suggests that it’s not due to ride-sharing services such as Uber or to differences in the availability of public transport.

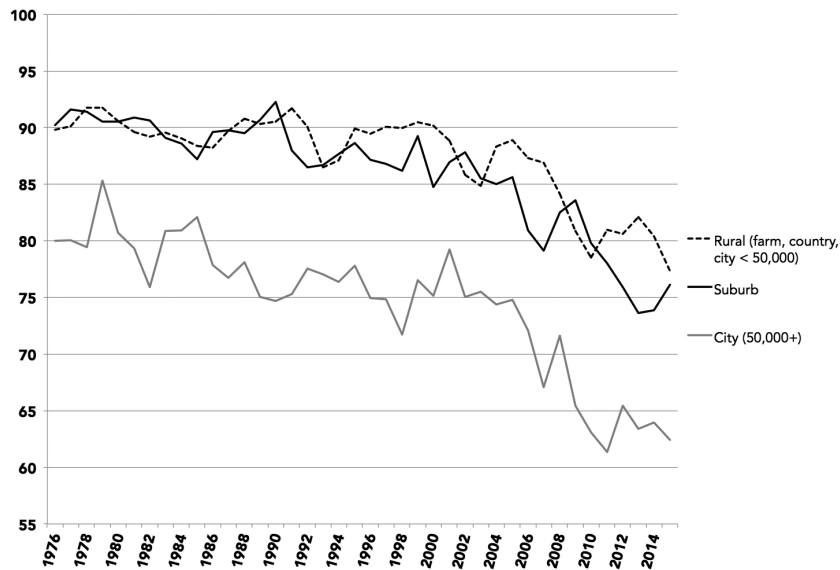


Figure B.4. Percentage of 12th graders with a driver’s license in rural, suburban, and urban areas. Monitoring the Future, 1976–2015.



### Working

The number of hours a week teens spend at work has also been slashed. In the 1970s, 12th graders spent about fifteen hours a week in paid or unpaid work on average; in the 2010s, they spent about nine hours—thus six hours less (the question asks about paid and unpaid work for 12th graders and only paid work for everyone else). The peak of 10th graders’ work hours came in 1997, when they worked six hours a week on average; by 2015, the average 10th grader worked two and a half hours a week. These numbers include the now-large percentage who don’t work at all, but even among those who have a job teens are working fewer hours. In the late 1970s, the average 12th grader with a job worked about nineteen hours a week; by 2015, that number dropped to sixteen. Tenth graders with jobs in the late 1990s worked about thirteen hours a week, compared to ten and a half hours a week in 2015.

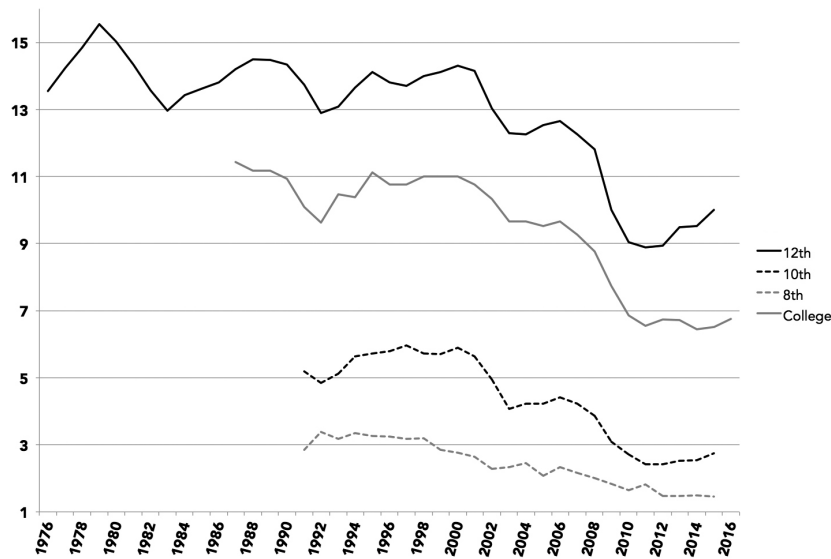


Figure B.5. Hours per week spent working at a paid job (8th and 10th grades and college) and paid or unpaid job (12th graders). Monitoring the Future and the American Freshman Survey, 1976–2016.

The decline in working at all was similar within socioeconomic statuses.

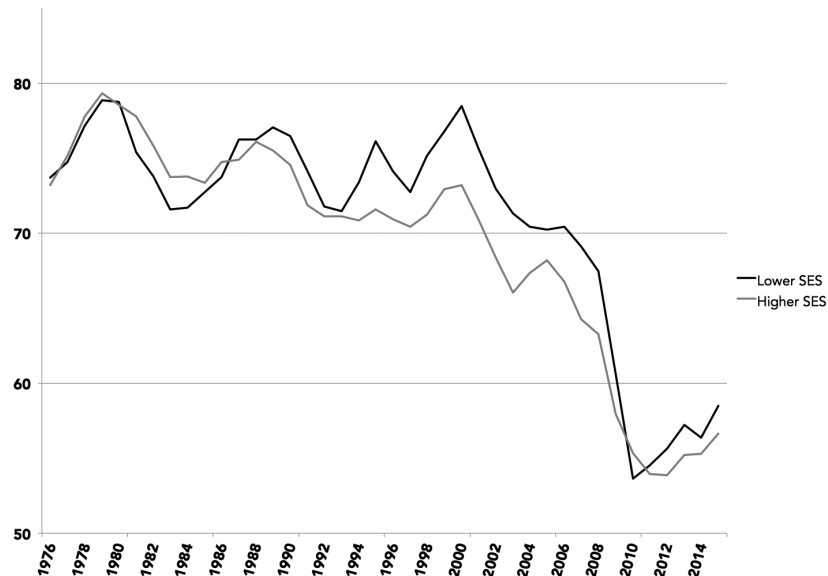


Figure B.6. Percentage of 12th graders working for pay during the school year, by socioeconomic status (father’s education). Monitoring the Future, 1976–2015.

Fewer teens worked during the summer as well.

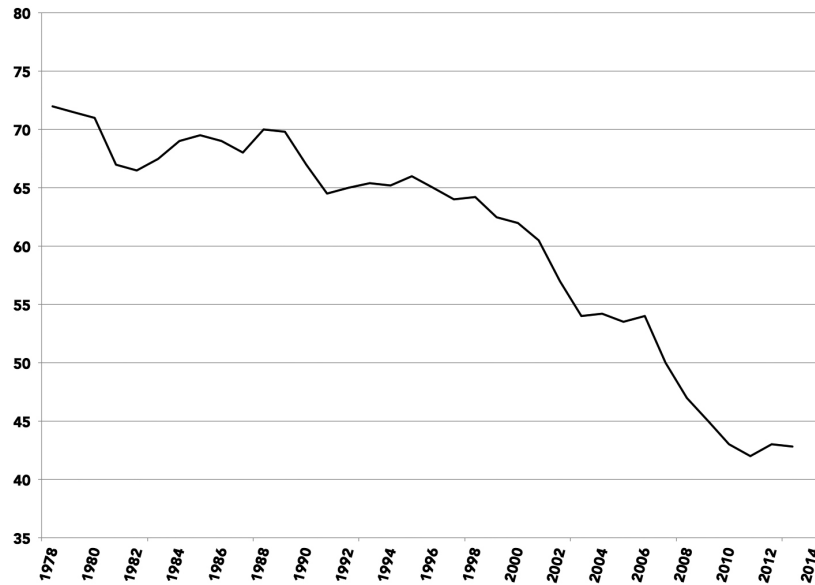


Figure B.7. Percentage of 16- to 19-year-olds employed in July. Bureau of Labor Statistics data analyzed by Challenger, Gray, and Christmas.

What if teens are spending more time on school activities, and that's why they don't have time to work? However, that's not the case. Time spent on extracurricular activities has not changed much; the only real increase is in volunteering, which increased by about eleven minutes a day over the entire time period and not at all since 2010. Participation in sports and exercise dropped by seven minutes a day since 2012.

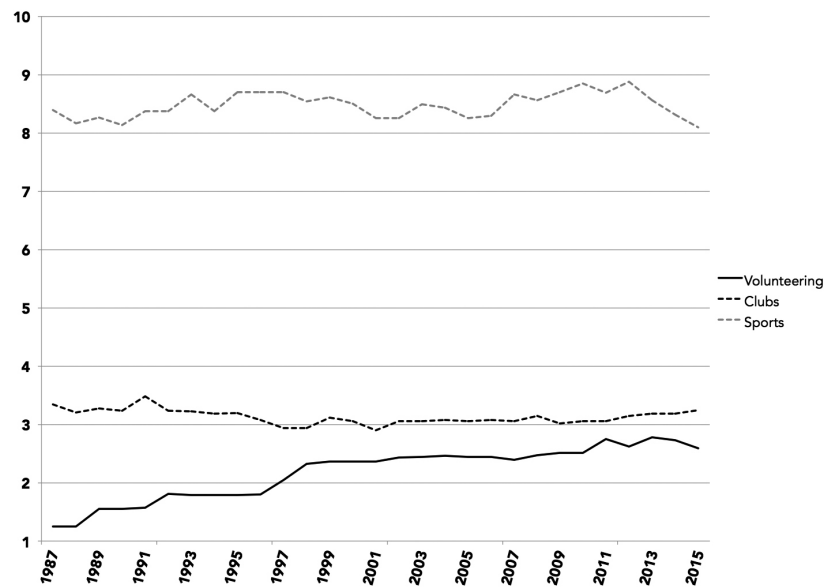


Figure B.8. Hours per week spent on sports, student clubs, and volunteer work by entering college students reporting on their last year in high school. American Freshman Survey, 1987–2015.

Teens in 2015 spent less time on homework than their counterparts in the early 1990s (twenty-one, six, and five fewer minutes a day, for 8th, 10th, and 12th graders, respectively), with 12th graders heading to four-year colleges spending about the same amount of time. The pattern of change is curvilinear, however; homework time declined fairly steadily between the late 1980s and the mid-2000s and then increased again, though the increase did not make up for all of the loss. Between Millennial-era 2005 and iGen-era 2015, time spent doing homework decreased by eight minutes a day for 8th graders and increased six, four, and thirteen minutes a day for 10th graders, 12th graders, and 12th graders headed for college, respectively. These changes are too small to account for the larger decreases in working for pay—and working for pay has declined steadily, unlike the curvilinear pattern shown here.

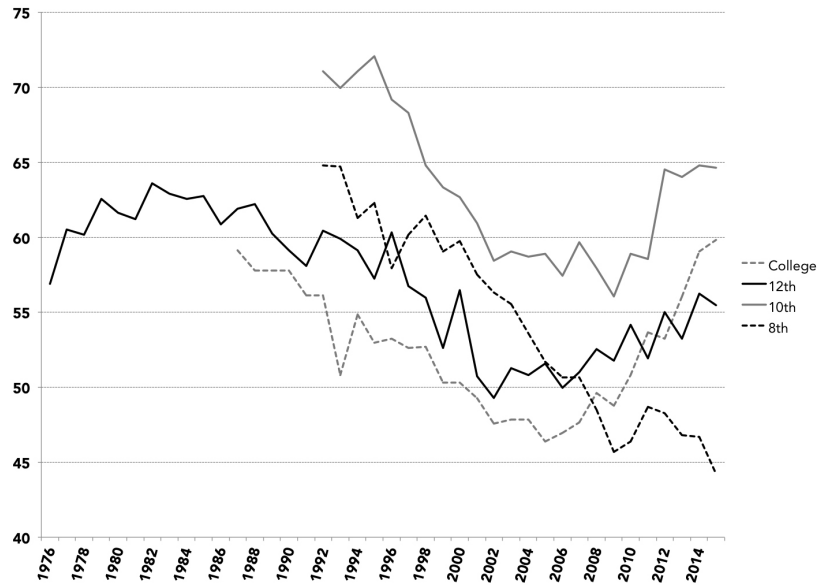


Figure B.9. Minutes a day spent on homework or studying, 8th, 10th, and 12th graders (Monitoring the Future) and entering college students reporting on their last year in high school (American Freshman Survey), 1976–2016.

### Money

Just as with 12th graders, fewer 10th graders worked and fewer were given an allowance. Whereas nearly all 10th graders once had control of their own money (95% in the early 1990s), by 2015 only 72% did. That means more than one out of four 10th graders did not have money of their own to manage and spend.

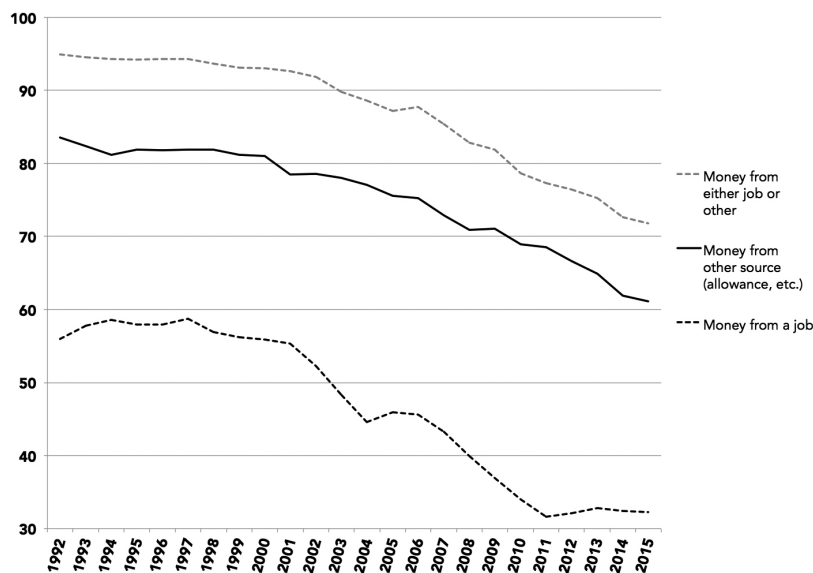


Figure B.10. Money from jobs, allowances, or either, 10th graders. Monitoring the Future, 1976–2015.

### Alcohol

It's not just ever trying alcohol that has decreased among teens; across two surveys, teens are also less likely to have drunk alcohol in the last month.

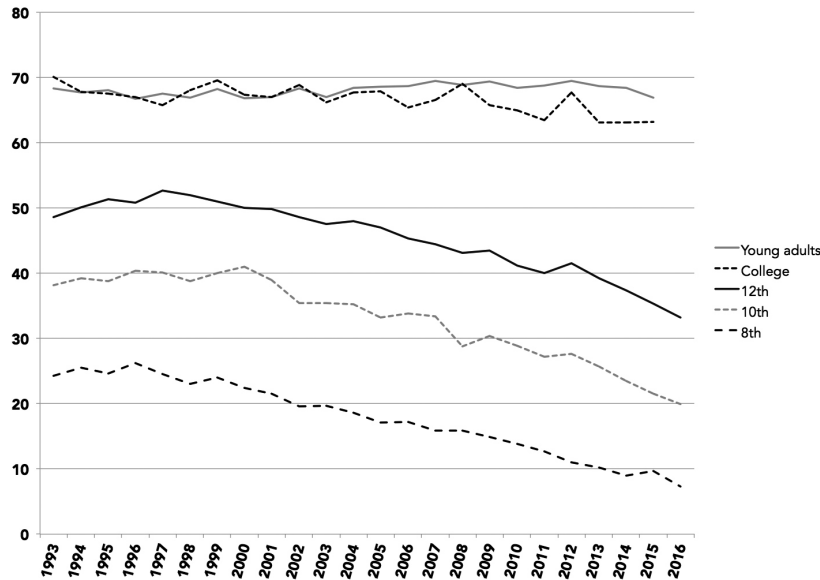


Figure B.11. Percentage of 8th, 10th, and 12th graders and college students and young adults who have drunk alcohol in the last 30 days. Monitoring the Future, 1993–2016.

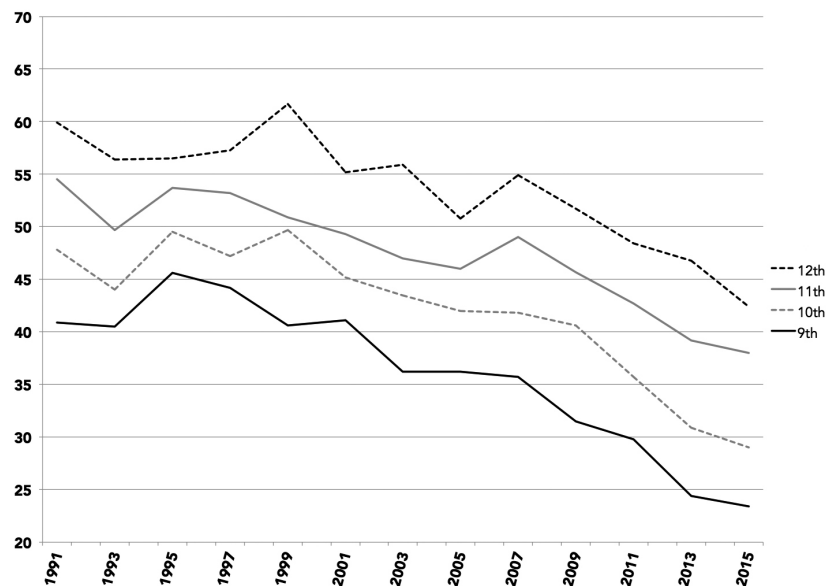


Figure B.12. Percentage of 9th to 12th graders who have drunk alcohol in the last 30 days. Youth Risk Behavior Surveillance Survey, 1991–2015.

### Individualism and Independence

It might seem paradoxical that young people would grow up more slowly in individualistic cultures—don't they encourage independence? They do, but individualism is also linked to larger cultural forces, including

economic prosperity, small families, and technologically advanced economies, all of which encourage a slow life strategy. There is a strong correlation between how individualistic a country is (measured by cross-cultural psychologists) and how quickly young adults in those countries achieve maturity in family roles (such as marriage and children) and work roles (such as completing education and beginning full-time work). That's what the next two graphs show (see Figures B.13 and B.14).

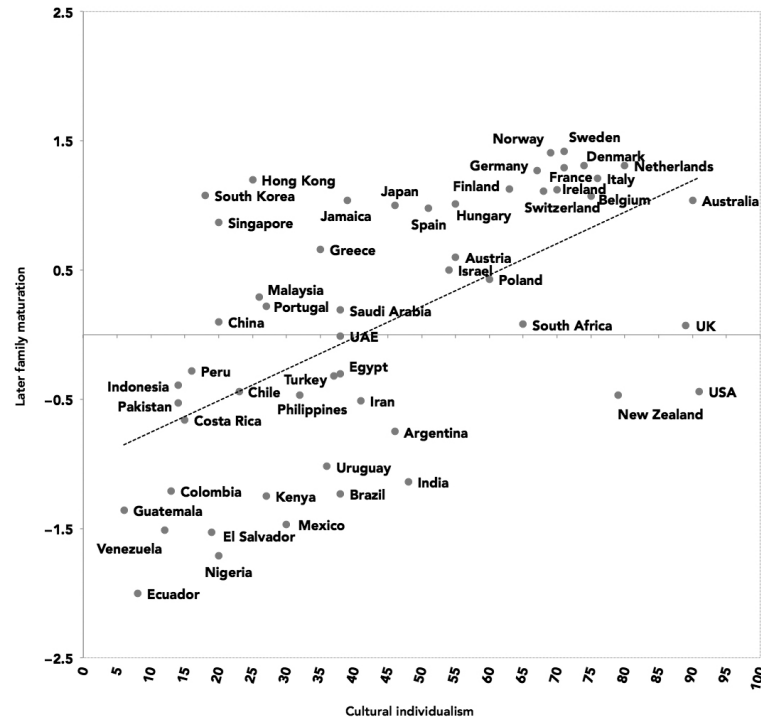


Figure B.13. Correlation between individualism and time to maturation in family roles, 58 countries, based on Twenge & Campbell (2017).

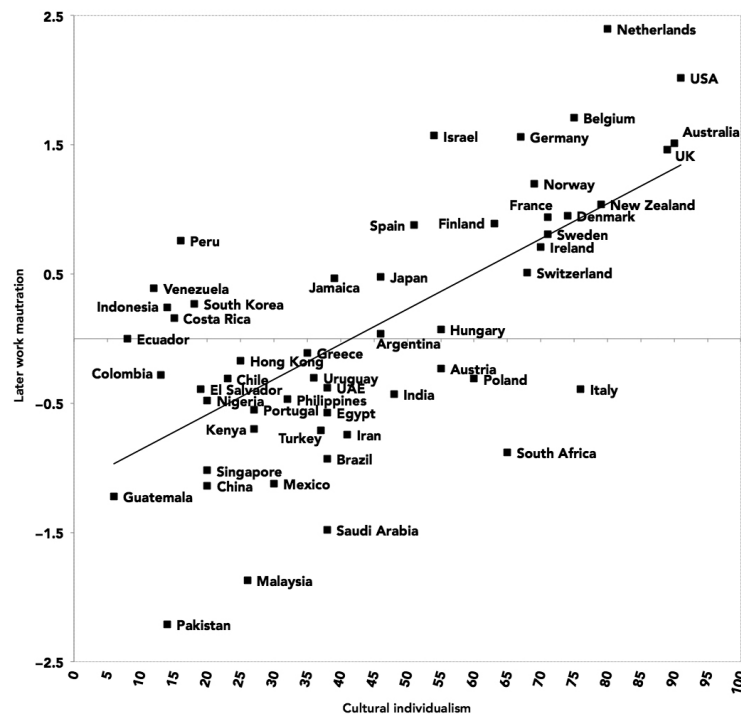


Figure B.14. Correlation between individualism and time to maturation in work roles, 58 countries, based on Twenge & Campbell (2017).

The pattern also holds across time in the United States. Individualism (measured by individualistic language, parents giving their children unique names, and other factors) rises at the same time that young adults take longer to achieve maturity in work and family roles (see Figure B.15). So both around the world and over time, individualism is linked to growing up more slowly.

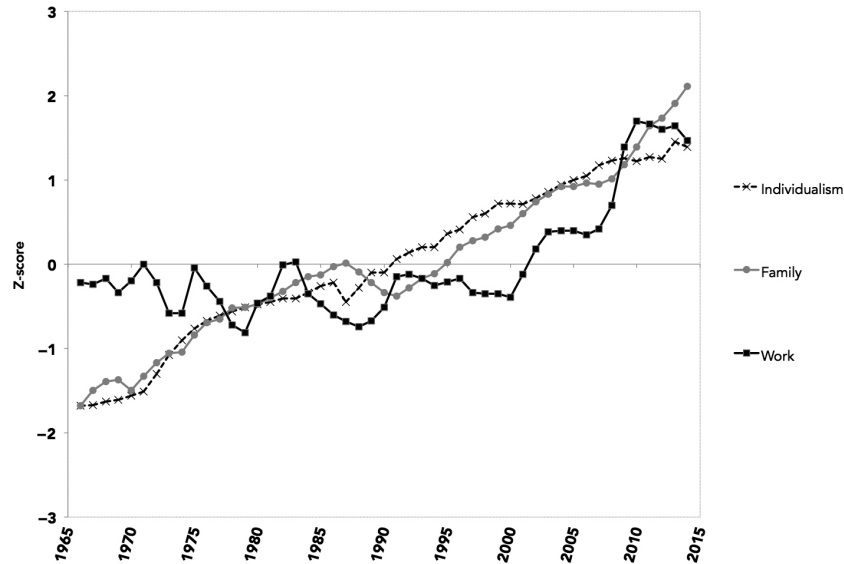


Figure B.15. Change over time in individualism, time to maturation in family roles, and time to maturation in work roles, United States, 1965–2015, based on Twenge & Campbell (2017).

Teens are now less likely to fight with their parents.

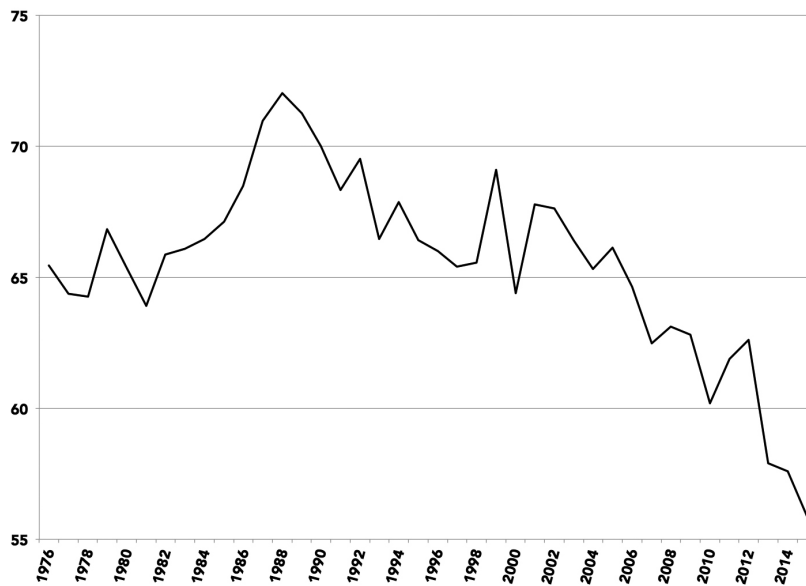


Figure B.16. Percentage of 12th graders who have gotten into three or more fights with their parents over the last year. Monitoring the Future, 1976–2015.

*Appendix C*

## Chapter 2 Extra Stuff

Time spent online is very similar by social class—for example, by mother’s education. In fact, those with the most advantages—a mother with a college education—actually spend a little less time online. Thus it can no longer be argued that defining this generation by technology leaves out the less fortunate; kids from disadvantaged backgrounds spend just as much time online, if not more, than kids with more advantages. (Using father’s education produces very similar results.)

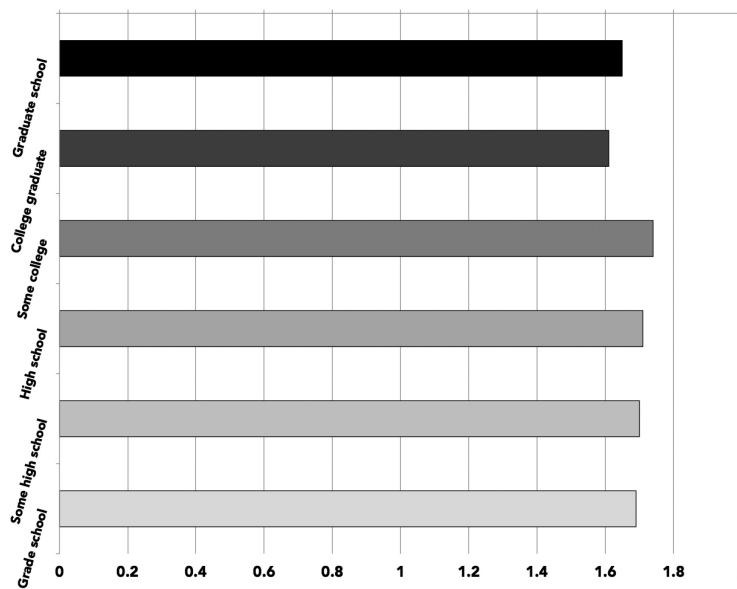


Figure C.1. Hours a day spent on the Internet by 8th, 10th, and 12th graders, by mother’s level of education. Monitoring the Future, 2013–2015.

Social media use is higher among girls, but boys have recently started to catch up—possibly due to the popularity of Snapchat among boys.

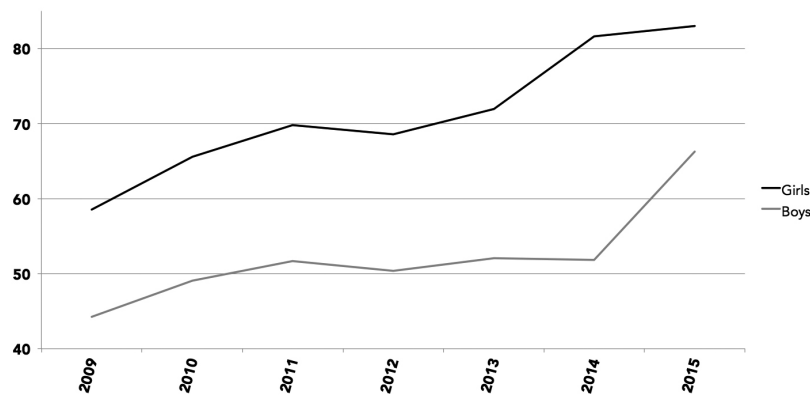


Figure C.2. Percentage of 8th graders who use social networking sites every day or nearly every day, by sex. Monitoring the Future, 2009–2015.

Girls now use electronic devices the same amount as boys.

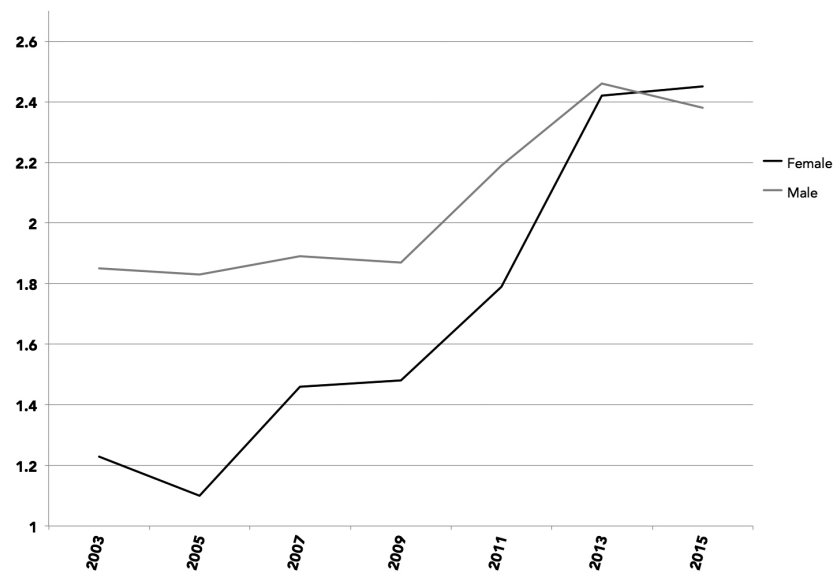


Figure C.3. Hours spent on electronic devices per day by 9th to 12th graders, by sex. Youth Risk Behavior Surveillance System, 2003–2015.

On this survey, the wording of the question about electronic devices may have something to do with the gender difference. In 2003 and 2005, the survey asked, “On an average school day, how many hours do you play video or computer games or use a computer for something that is not school work?” In 2007 and 2009, it asked, “On an average school day, how many hours do you play video or computer games or use a computer for something that is not school work? (Include activities such as Nintendo, Game Boy, PlayStation, Xbox, computer games, and the Internet.)” In 2011: “On an average school day, how many hours do you play video or computer games or use a computer for something that is not school work? (Include activities such as Xbox, PlayStation, Nintendo DS, iPod touch, Facebook, and the Internet.)” In 2013 and 2015, “On an average school day, how many hours do you play video or computer games or use a computer for something that is not school work? (Count time spent on things such as Xbox, PlayStation, an iPod, an iPad or other tablet, a smartphone, YouTube, Facebook or other social networking tools, and the Internet.)” The large increase for girls from 2011 to 2013 most likely occurred because smartphones and tablets were included for the first time.



Differences based on other demographic variables are smaller, and the increases in social media and electronic device use appear across races and regions and in rural and urban locations. These trends have not left any groups untouched.

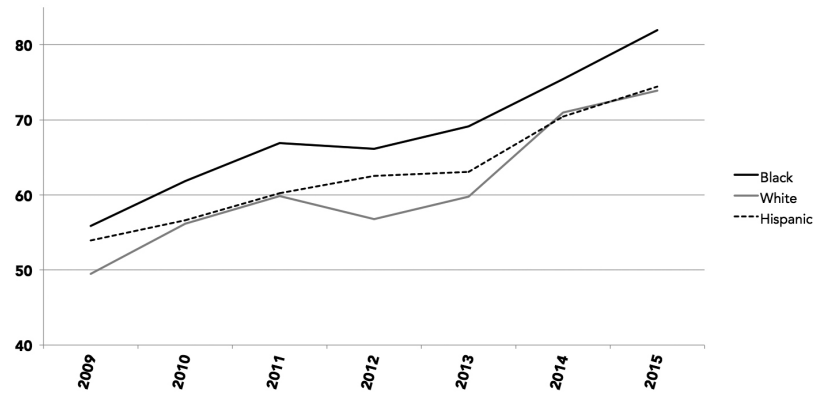


Figure C.4. Percentage of 8th graders who use social networking sites every day or nearly every day, by race. Monitoring the Future, 2009–2015.

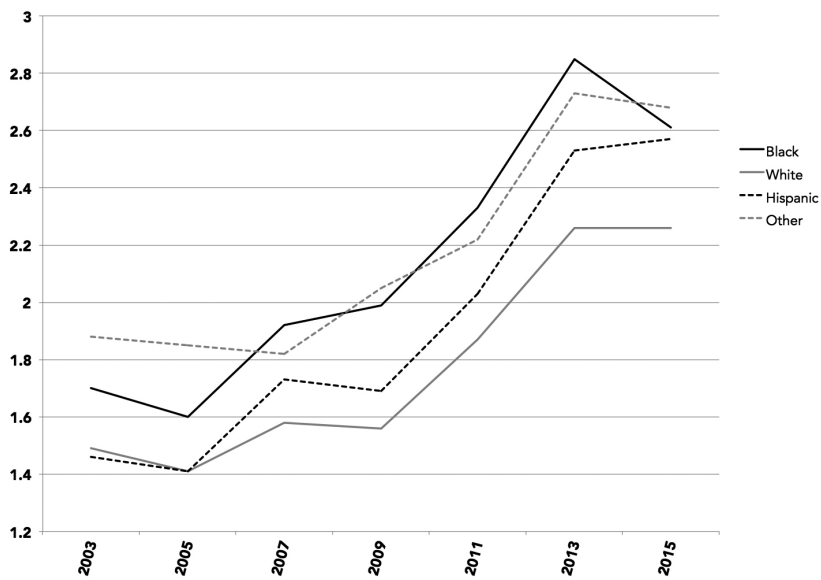


Figure C.5. Hours spent on electronic devices, 9th to 12th graders, by race. Youth Risk Behavior Surveillance System.

The increase in social media use is nearly identical among socioeconomic status groups.

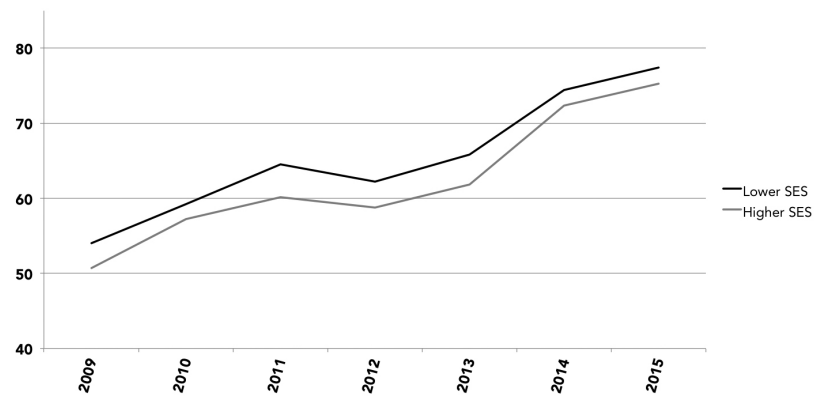


Figure C.6. Percentage of 8th graders who use social networking sites every day or nearly every day, by socioeconomic status. Monitoring the Future, 2009–2015.

It is also very similar by US region . . .

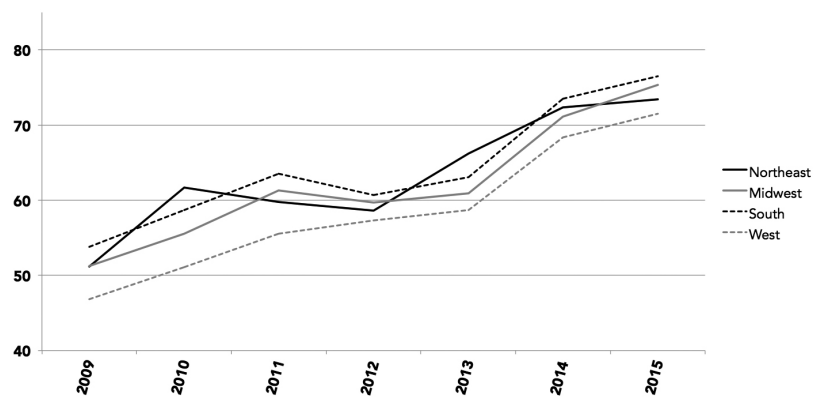


Figure C.7. Percentage of 8th graders who use social networking sites every day or nearly every day, by region. Monitoring the Future, 2009–2015.

. . . and based on whether students are in rural or urban locations.

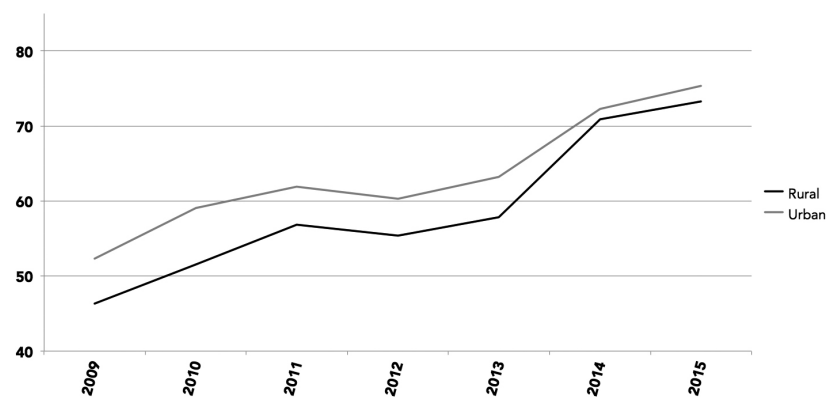


Figure C.8. Percentage of 8th graders who use social networking sites every day or nearly every day, by rural vs. urban location. Monitoring the Future, 2009–2015.

The MtF survey asks about Internet use during leisure time—online time outside of that for school or work. As you might expect, iGen teens spend more time online than their Millennial predecessors did—12th graders in 2014 spent twice as many hours a week than in 2006 (fourteen hours vs. seven hours), 10th graders about five more hours, and 8th graders three and a half more hours.

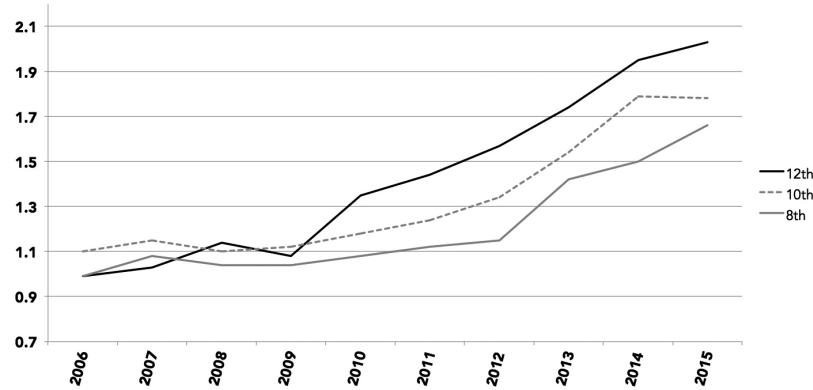


Figure C.9. Hours a day spent on the Internet by 8th, 10th, and 12th graders. Monitoring the Future, 2006–2015.

Similar to electronic device use, the gender gap has disappeared; whereas 12th-grade boys in 2006 spent two more hours a week online than girls, by 2013 they spent about the same amount of time online. Although the Internet still has a male-dominated vibe in many corners, other places, such as most social networking sites, are now female-dominated spaces. Recall that girls spend about four hours a week more on these sites than do boys.

However, watching TV goes the other direction. While the majority of 9th graders spent three or more hours a day watching TV in 1999, that was cut in half (to 26%) by 2015. The percentage of 12th graders who were heavy TV users stayed fairly constant from 1999 to 2013 and then dropped 19% from 2013 to 2015.

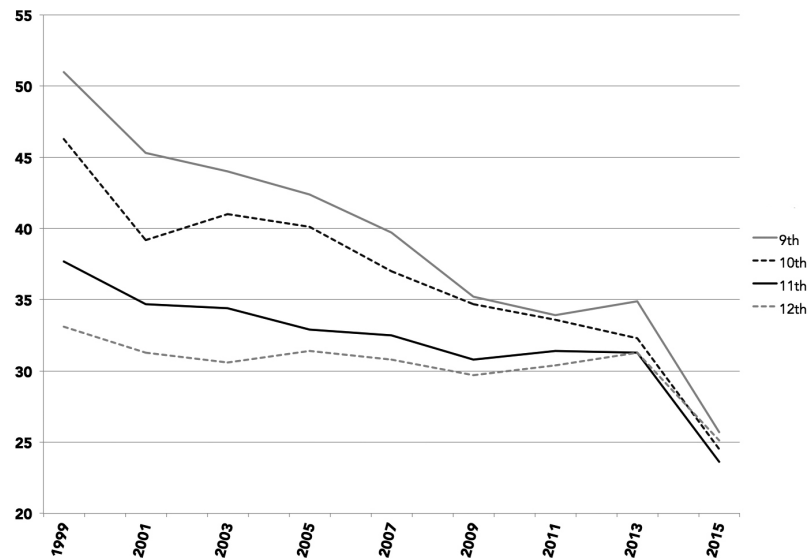


Figure C.10. Percentage of 9th to 12th graders who watched three or more hours of TV on an average school day. Youth Risk Behavior Surveillance System, 1999–2015.

Appendix D

Chapter 3 Extra Stuff

Driving around in a car just for fun is increasingly a thing of the past. The cruising glory days were the 1970s and 1980s, when nearly three out of four teens rode around with their friends every week. Cruising became less popular in the 1990s and declined the most during the Internet age (see Figure D.1). The number who never cruise has tripled, from 6% in 1989 to 18% in 2015. With fewer teens driving and more communication through screens, driving around with nothing to do has lost its appeal.

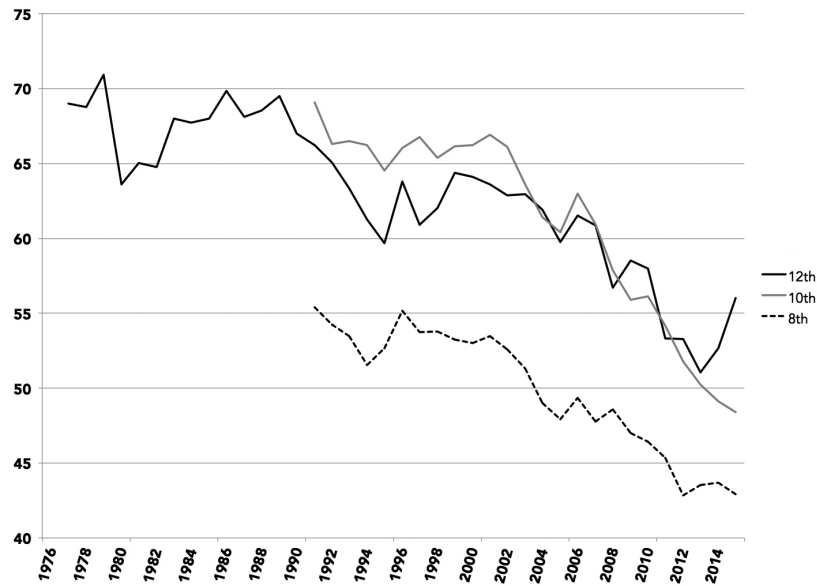


Figure D.1. Percentage of 8th, 10th, and 12th graders “riding in a car—just for fun” once a week or more, Monitoring the Future, 1977–2015.

Teens also spend more time alone than they used to—and it’s likely that alone time is spent looking at a screen.



Figure D.2. Percentage of 8th, 10th, and 12th graders who spent an hour or more of leisure time alone nearly every day. Monitoring the Future, 1976–2015.

As the figures in the main text show, a greater use of social media is linked to lower well-being. It is possible that the same types of teens are both unhappy and drawn to (for example) social media. Here, the major factor is gender: girls are more prone to being unhappy and also spend more time on social media. Other factors might be linked to both more social media use and more happiness, which would mean that the numbers in the chart are actually too low (called a suppressor effect). The main candidate there is spending more time with friends in person: teens who are social in person are also social online. Since in-person time leads to more happiness and social media to less, it's worth looking at the unique effects of online interaction, controlling for in-person social interaction. When both gender and in-person social interaction are taken into account, the chances of being unhappy for heavy screen time users is about the same; accounting for gender lowers the relative risk for screen time predicting unhappiness, and including in-person social interaction increases it. Including other demographic factors, such as race, class, and region, barely budges the relative risks. The links between happiness and activities are also about the same when examined within groups—say, among working-class teens or among Latino teens. Across the board, teens who hang out with their friends in person are happier, and teens who connect with their friends online more are less happy.

The text reports the links between activities and happiness for 8th graders. The results for 10th graders are similar (see Figure D.3). The chart shows the data for 2013–2015 only because the questions on hours spent online, on games, on texting, and on social networking sites were asked beginning in 2013.

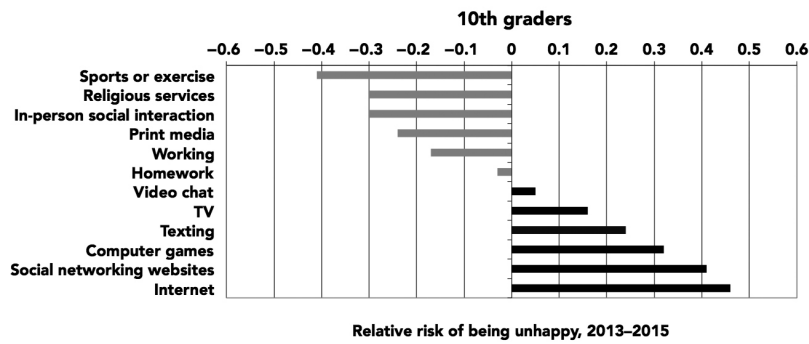


Figure D.3. 10th graders' relative risk of being unhappy related to time spent on screen and nonscreen activities. Monitoring the Future, 2013–2015.

The text reports the links between activities and loneliness for 10th graders. The results for 8th graders are similar (see Figure D.4). Just as with happiness, the risk of loneliness from using social media decreases a little when gender is controlled for but then increases again once in-person social activities are controlled for.

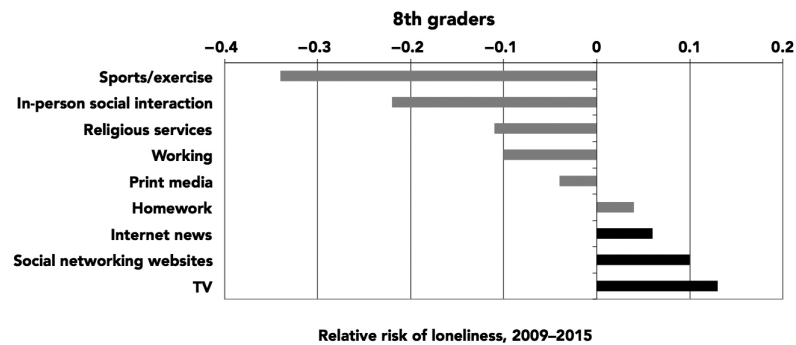


Figure D.4. 8th graders' relative risk of loneliness related to time spent on screen (black bars) and nonscreen (gray bars) activities. Monitoring the Future, 2009–2015.

The text reports the links between time spent on screen and nonscreen activities and depression for 8th graders. The results for 10th graders are similar (see Figure D.5).

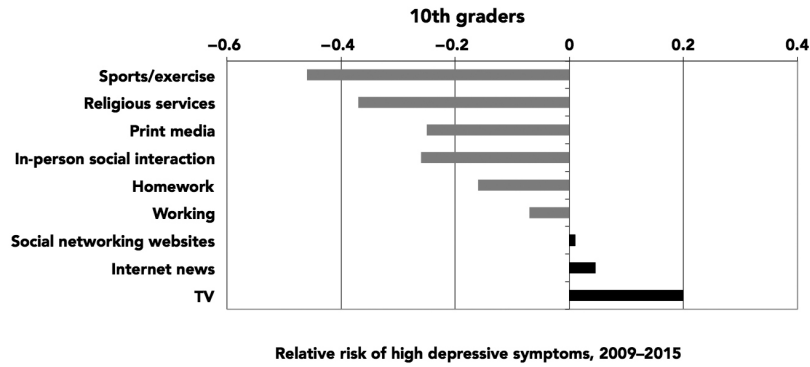


Figure D.5. 10th graders’ relative risk of high depressive symptoms related to time spent on screen (black bars) and nonscreen (gray bars) activities. Monitoring the Future, 2009–2015.

Because in-person social interaction protects against depression more for 10th graders, controlling for it makes a bigger difference in the links among social networking sites, Internet news, and depression. Going out with friends and using social media are positively correlated, so we want to know the unique effect of time spent online, controlled for in-person social interaction. When it’s controlled for, along with demographic factors such as gender, race, and SES, teens who spend more time on social media and reading news online are significantly more likely to be depressed, though it’s a small effect (see figure D.6). (This graph shows odds ratios, a different statistic from relative risk, that can be controlled for outside factors.)

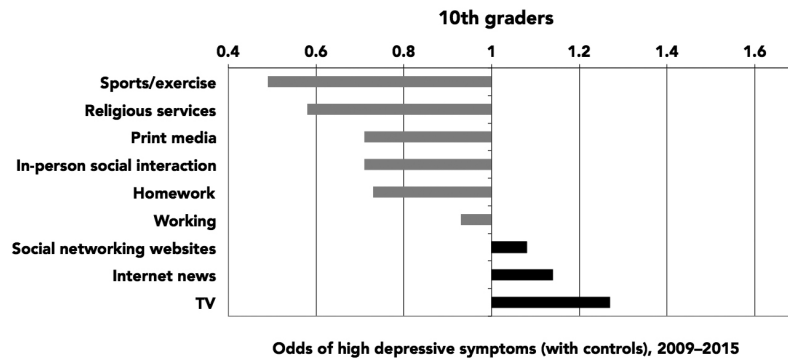


Figure D.6. 10th graders’ odds of high depressive symptoms related to time spent on screen (black bars) and nonscreen (gray bars) activities, with controls for demographic factors and in-person social interaction. Monitoring the Future, 2009–2015.

*Appendix E*

## Positive Self-Views, High Expectations, the Eroding Link Between Happiness and Age, and Everybody's Favorite, Narcissism

The relentless positivity encouraged in our society began long before the Internet. It has its roots in a fundamental shift in American culture, one that was bubbling below the surface for many decades before emerging during the 1960s: the growing focus on the individual self and the abandonment of social rules. Cross-cultural psychologists call this individualism; it emphasizes uniqueness, equality, and self-expression. (And thus, like many other trends, it is not all good or all bad. It just is.) Cultural individualism continued to grow only after the 1960s, taking on ever more self-focused forms and shaping GenX and especially Millennials (the subject of my previous book *Generation Me*). Many of these trends continue with iGen, but they are more Millennials' story—thus their residence here in this appendix rather than in the main text.

One of the core values of individualism is equality; we explored that in chapter 9, "Inclusive," on tolerance and acceptance. Here we'll focus on the impact of individualism on views of the self—how the emphasis on thinking highly of yourself is not the unmitigated boon it's often assumed to be.

One somewhat extreme manifestation of increased individualism is a nearly relentless overconfidence—an emphasis on thinking highly of oneself no matter what. Those ideas began to pervade the culture beginning in the 1980s. For example, the graph below shows the growth of the phrase "I'm the best" in books published in the United States between 1960 and 2008 from the Google Books database (which contains the full text of 5 million books; 2008 is the most recent year available).

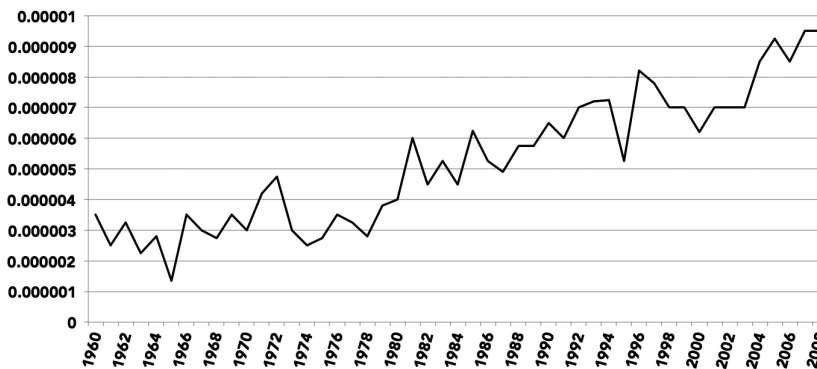


Figure E.1. Appearance of the phrase "I'm the best" in American books. Google Books database, 1960–2008.

Song lyrics show these trends as well, shifting away from the dippy but highly prosocial love songs of the 1980s to more antisocial and narcissistic themes by the 2000s, such as Justin Timberlake's song that single-

handedly brought “Sexy Back.” This overwhelming self-positivity has shaped iGen’ers, just as it did Millennials. As a result, more believe that they are superior to their peers in important skills (see Figure E.2).

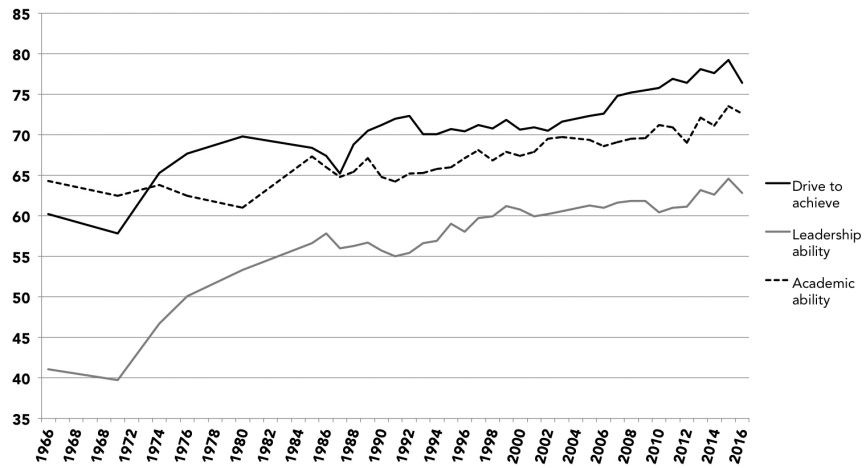


Figure E.2. Percentage of entering college students who believe they are above average compared to others their age in their drive to achieve, leadership ability, and academic ability. American Freshman Survey, 1966–2016.

Since students are comparing themselves to others their age, they aren’t actually any better (any increase in ability would be constant in the comparison). In addition, students are not in fact any smarter; SAT scores and other standardized test scores are either lower than or about the same as they were in years past. Demographic shifts, such as the larger numbers of women, Latinos, and Asian Americans in college now, would push those numbers down instead of up, as those three groups score lower on self-ratings of abilities. And with more students going to college recently than in the past, the students filling out the survey are a less select portion of people their age, another force that should push the numbers down. So why do they go up?

Probably because feeling good about yourself is so emphasized and positive feedback (such as participation trophies) are so common. The academic equivalent of “everyone gets a trophy” is “everyone gets an A,” so if thinking highly of yourself has become institutionalized, we should see significant grade inflation. And we do.

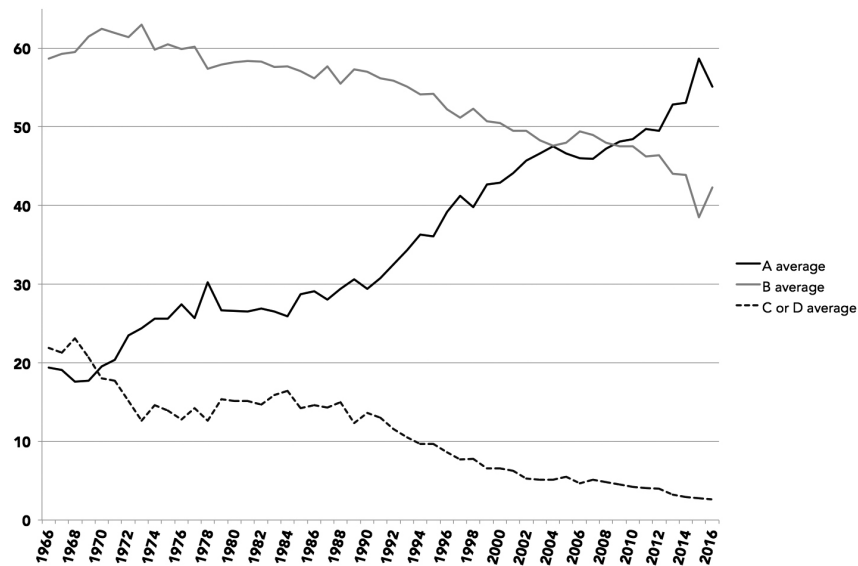


Figure E.3. Percentage of students who graduate from high school with an A, B, or C or D average, entering college students, American Freshman Survey, 1966–2016.



No wonder college students think that their abilities are superior: the majority of them are A students. With more students entering college thinking of themselves as A students, it's no wonder that more are shocked when they receive B's or, God forbid, C's, their first year in college. Grade inflation has continued, and even ticked up, after iGen entered college in 2012.

Grade inflation also appears among high school seniors, ruling out any effects of colleges becoming more (or less) selective.

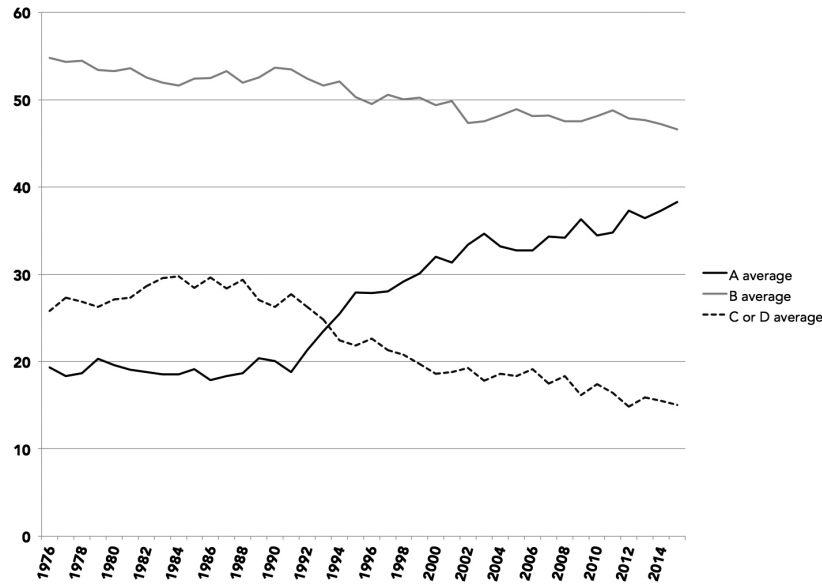


Figure E.4. Percentage of students who graduate from high school with an A, B, or C or D average, 12th graders, Monitoring the Future, 1976–2015.

This emphasis on praise has occurred at the same time that students' expectations for their future lives have soared. Perhaps because more students think of themselves as academically superior, more expect to graduate from college. Only about half of students in the late 1970s thought they would get a bachelor's degree, but by the 2010s about 85% thought they would. However, the percentage of Americans in their late twenties who hold college degrees has barely budged (see Figure E.5). Expectations have taken flight while reality has changed very little. Here, the big rise is during the GenX and Millennial years, with iGen continuing but not further increasing the number who expect to finish a bachelor's degree.

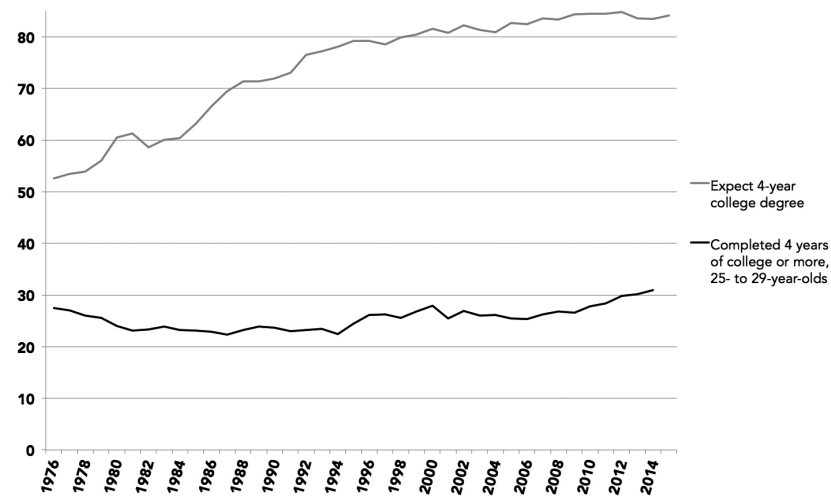


Figure E.5. Percentage of 12th graders who expect to earn a four-year college degree (Monitoring the Future) and percentage of 25- to 29-year-olds who have earned a four-year college degree (Current Population Survey), 1976–2015.

The contrast between expectations and reality is even starker for the most vulnerable students, the shrinking population who graduate from high school with a C or D average. More and more of these students believe they will graduate from college even as the number of them who enroll in four-year colleges dwindles to almost zero (see Figure E.6). Yes, a few high school C and D students will get college degrees, but encouraging them to expect to do so might very well be setting them up for failure and disappointment.

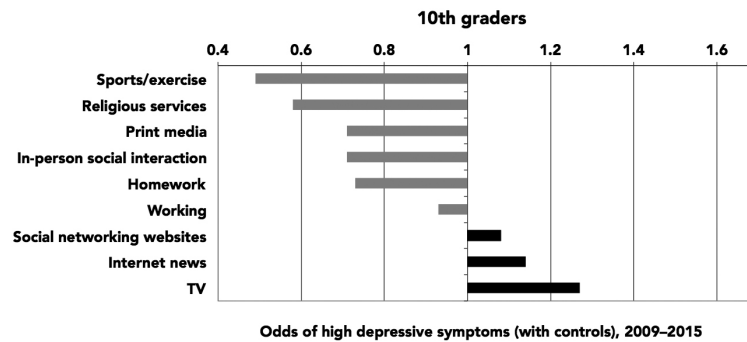


Figure E.6. Percentage of students with a C or D average who expect to earn a college degree, 12th graders, Monitoring the Future, 1976–2015, and percentage of entering college students with a C or D average, American Freshman Survey, 1966–2016.

Could it be a good thing to have self-confidence, even if it is unrealistic? According to most research, no. Self-confidence doesn't improve grades or performance. It doesn't necessarily hurt, but it doesn't help, either, and it's certainly no substitute for hard work. Here's one concrete example: Which ethnic group in the United States has the lowest self-esteem? It's Asian Americans, who achieve the best academic performance. That result alone negates the idea that self-confidence is the key to success. Instead of focusing on self-confidence, Asian American culture tends to focus on hard work, so it's really no surprise that their academic performance is higher on average.

### **Individualism: Great When You're Young, Not So Much When You're Older**

As generations raised on positive self-views and lots of positive feedback, Millennial and iGen teens are happier than GenX teens were in the early 1990s. Individualism has brought freedom and positive feelings to young people. As the main text explains, iGen'ers' happiness has begun to falter, but it's still higher than that of the unhappy grunge-listening GenX'ers wearing black in 1992.

But there's a worm in this bright, shiny apple of youth happiness of late: What happens when teens get older and find out that their big dreams won't be fulfilled? That reality check often happens after age 30, during the mature adult years when people settle into career paths. If they hit the wall of a reality check,

their happiness might suffer. Sure enough, mature adults' happiness has faded—especially in the years since 2000. Whereas mature adults were once significantly happier than young adults, by the 2010s, maturity no longer conferred a happiness advantage (see the top part of Figure E.7—the converging lines show how age no longer confers as much of a benefit for happiness).

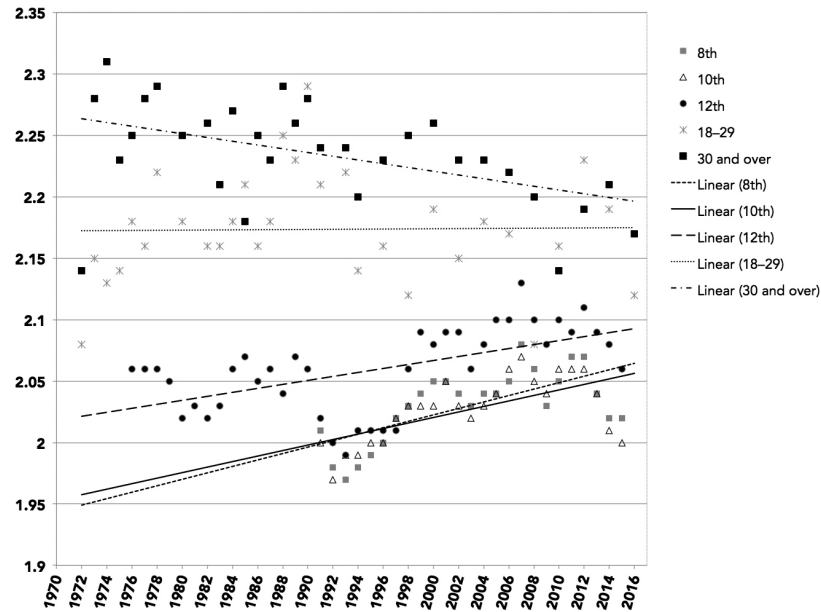


Figure E.7. Happiness by age group, yearly averages (symbols) and linear trends (lines), Monitoring the Future and General Social Survey, 1972–2016.

Why did this happen? Individualism—more focus on the self and less on others—is a different experience when you're in your twenties than when you're in your thirties or older. The optimism and freedom of individualism feel great when you're young, but those same characteristics can be unwelcome in mature adulthood, when people instead need a close community to help them raise children and build safe neighborhoods. Endless self-positivity feels great when you're 16 but hollow when you're 45. In past generations, the bubble of inflated expectations was not as big, so when it burst it didn't have as much of an impact. In the last few decades, the expectations bubble was bigger, so when it burst, unhappiness followed. We can even show that with data: if you go year by year and match 12th graders' expectations for their education with mature adults' happiness twelve years later (when those 18-year-olds are turning 30), the two correlate  $-.68$  ( $-1$  is the maximum). That means that graduating classes with high expectations were significantly more likely to be unhappy twelve years later. This type of analysis can't show that high expectations cause unhappiness, but it does show that one predicts the other.

Happiness is sometimes defined as reality divided by expectations. One study, for example, found that the amount of a monetary payoff after a game didn't matter for players' happiness; what mattered was whether the dollar amount was more or less than the study instructions had led them to expect. As one adult put it in an online forum, "The popular belief that you can become whoever you want to be is the problem. . . . A lot of people are feeling the implications of a life built on fantasy." Overall, the modern American system of more focus on the self and less on others benefits youths with more choices and more freedoms but harms adults with unmet dreams and absent support systems. As Janis Joplin sang, "Freedom's just another word for nothing left to lose."

### Positive Self-Views and Narcissism: iGen's Reality Check

The trends in happiness suggest that GenX'ers and Millennials didn't experience a serious reality check until they hit 30. For iGen'ers, it might be arriving earlier.

Although iGen college students are still just as convinced that they are above average, iGen high school students have begun to doubt themselves more; the rise in positive self-views over the course of the Millennial generation has been wiped out. iGen'ers are still more likely to believe they are above average than GenX'ers and Boomers did, but the bubble may have burst (see Figure E.9).

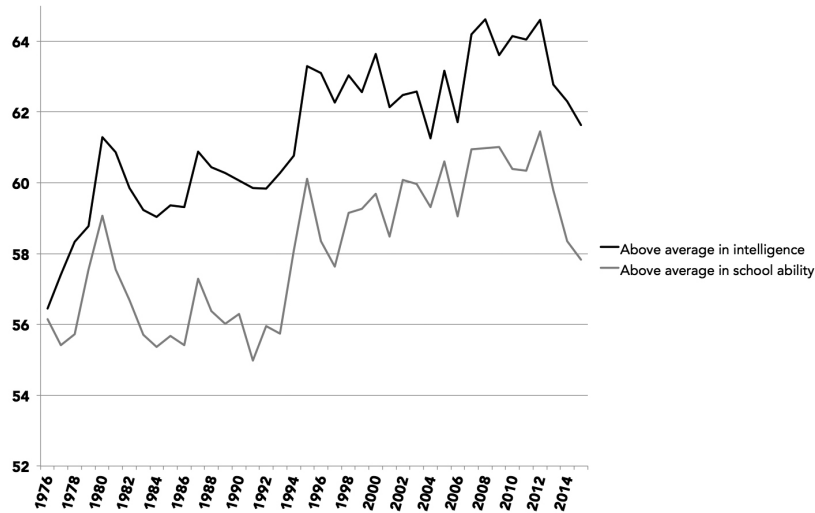


Figure E.9. Percentage of 12th graders who believe they are above average in intelligence and school ability. Monitoring the Future, 1976–2015.

iGen'ers have also arrested a long-standing trend in self-esteem. Millennials, built up by a culture that told them, “You’re special just for being you,” were confident that they liked themselves—though, with little solid basis for their self-esteem, they doubted their self-competence more than GenX'ers did. iGen'ers, though, are lower in both self-competence and self-liking; both slid precipitously after 2012 (see Figure E.10).

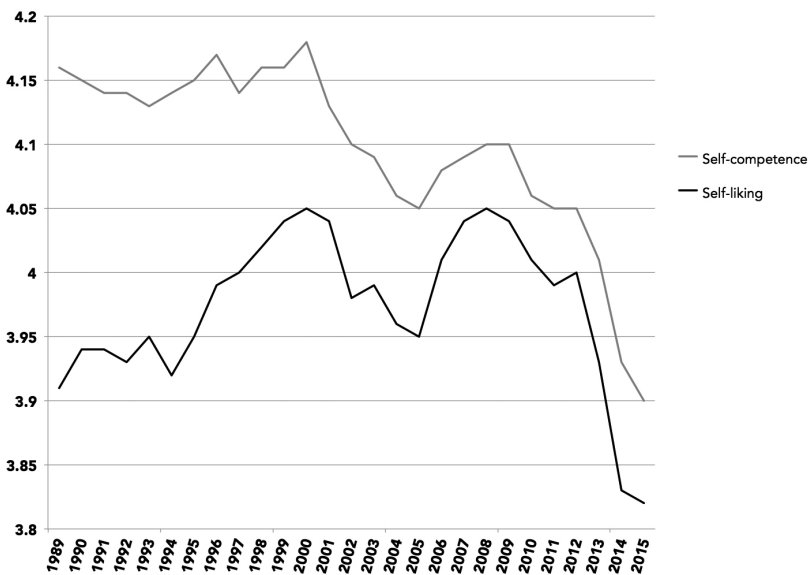


Figure E.10. 12th graders' self-competence and self-liking (subscales of self-esteem). Monitoring the Future, 1989–2015.

The Millennials' self-confidence has been replaced by iGen'ers' more uncertain view of themselves. Once again, iGen shows a sudden change in trends that had been going in the same direction for decades. That might be due to iGen'ers experiencing the Great Recession during their formative years; that was certainly a reality check. However, the drop in self-views happened well after the recession was over. Instead, the brutal world of social media and the Internet might be the pin that burst the bubble of youth self-confidence. That might not be a bad thing; self-views had become so inflated for Millennials that many managers complained about their overconfidence and sense of entitlement. If iGen'ers bring those views back to earth, they might be better equipped to handle the challenges of college and the workplace.

Speaking of which: Millennials have a reputation for narcissism—an inflated sense of self characterized by a sense of entitlement, vanity, attention seeking, lack of empathy, and overconfidence. That reputation is, at least in part, my doing. In February 2007, I presented a study showing that college students were more narcissistic than they used to be—a finding that garnered widespread press attention. Narcissism was measured by the standard measure in the field, the Narcissistic Personality Inventory, or NPI. Our study compared the average scores of about 15,000 college students between 1982 and 2006. Thus the results weren't due to being young—everyone was about the same age—and they weren't due to older people's complaints, as we relied on what students said about themselves. Other studies finding increases in narcissism in various samples (on college campuses from Alabama to Kentucky to California, in countries as far away as Korea, and in a screening study for narcissistic personality disorder) followed. So did other studies finding trends in traits related to narcissism (decreases in empathy, increases in materialism, decreases in concern for others, and increases in thinking that one is above average, featured above). My friend and colleague W. Keith Campbell, an expert on narcissistic personality traits, joined me in writing a book documenting these trends and their consequences: the increase in plastic surgery, the growth of credit, growing interest in uniqueness, issues in relationships. We called the book *The Narcissism Epidemic*, as an epidemic is defined as widespread prevalence, and because the rise had both causes and symptoms. Even though most narcissism is at the level of a personality trait, not a disorder, the disease model still fit. By the time *Time* magazine did a cover story on Millennials in 2013, the headline was “The Me Me Me Generation.”

Almost ten years later, we decided to take another look at the data on college student narcissism. In 2009, we'd written in *The Narcissism Epidemic* that the growth of easy credit and booming economic times might have been one possible cause of the rise in narcissism and thus that economic downturns might burst the bubble. Several studies since then had found that difficult economic circumstances had led to lower narcissism—both by age/generation and among individuals from challenging economic backgrounds. That made us wonder what had happened to narcissism scores during and after the Great Recession, the most severe economic downturn since the Great Depression. We expected at least a plateau in narcissism scores but found instead a surprise: a complete reversal of the previous increase.

The recession took all the steam out of college students' narcissism; suddenly they realized they weren't actually so great. It will be interesting to see what happens with narcissism in the coming years as the economy recovers. Narcissism might come back, or—given iGen'ers trend toward doubting themselves—it might level off or even continue to go down. For now, it appears that narcissism peaked with the Millennials in college right before the Great Recession, who were born in the early to mid-1980s. After that, narcissism was on a downslope—all the way back to the levels of the Boomers. So although iGen'ers have retained many of the characteristics of people raised in a highly individualistic culture, higher narcissism is apparently not one of them.

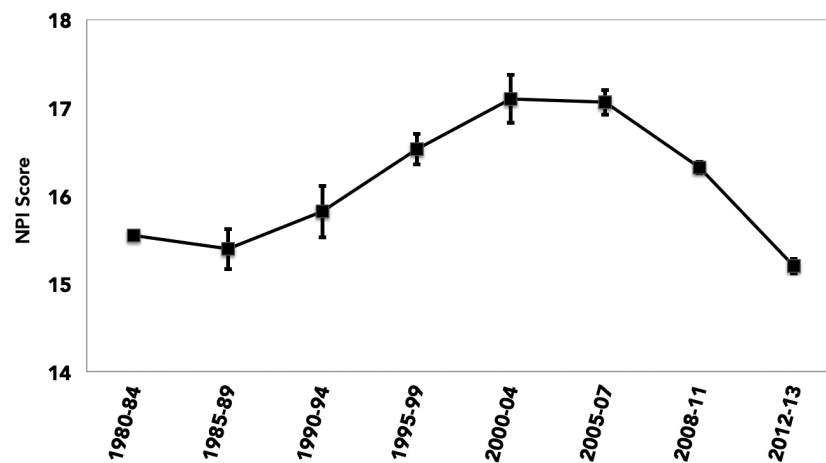


Figure E.11. College students' Narcissistic Personality Inventory scores, 1982–2013, based on Twenge, Konrath, Foster, & Campbell (2017).

*Appendix F*

## Chapter 4 Extra Stuff

Girls bear the brunt of the increase in loneliness; for example, the increase in the number who feel left out is much more steep for girls.

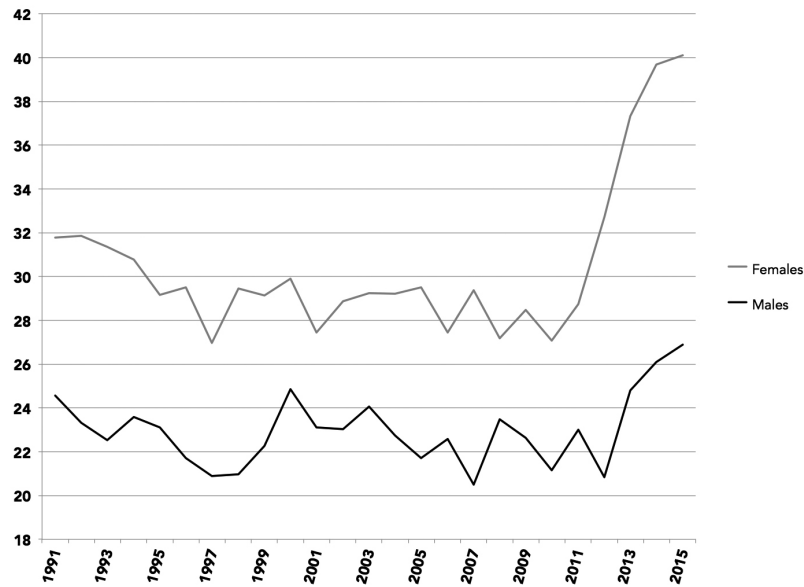


Figure F.1. Percentage of 10th graders who mostly agree or agree "I often feel left out of things," by sex. Monitoring the Future, 1991–2015.

### Depression: More Evidence

Depression isn't always obvious; it often appears as related physical and mental symptoms, such as trouble sleeping and trouble remembering. iGen'ers have continued the trend started by Millennials toward increases in these psychosomatic, less direct symptoms of depression. The trends in these more subtle symptoms are

steadier rather than sudden, with more gradual increases in symptoms as Millennials transition to iGen's (see Figure F.2).

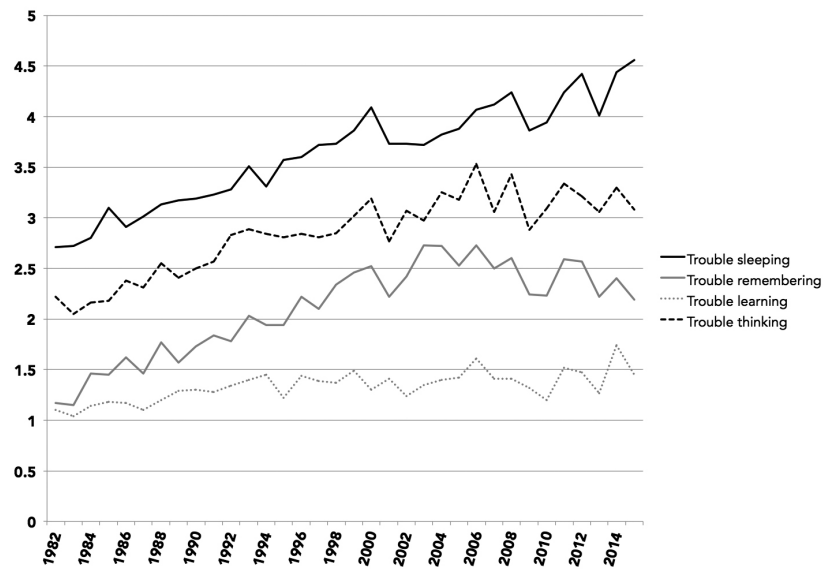


Figure F.2. Times per month 12th graders experience psychosomatic symptoms of depression. Monitoring the Future, 1982–2015.

Millennials experienced these symptoms of depression even as they showed little change in more direct symptoms, such as not enjoying life or feeling hopeless. The advent of iGen, on the other hand, produced an abrupt upswing in direct symptoms (see Figure F.3, which is the total of all six items on a continuous 1–5 scale and thus more comprehensive than the graphs in the main text).

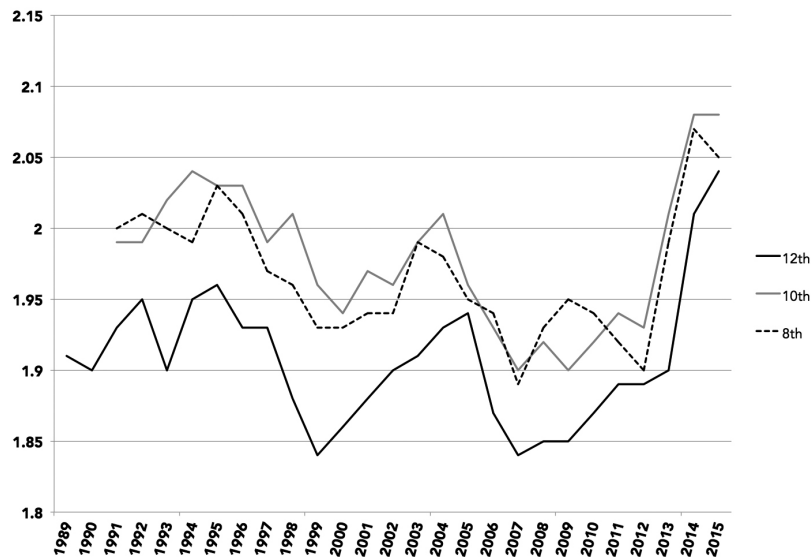


Figure F.3. Depressive symptoms among 8th, 10th, and 12th graders. Monitoring the Future, 1989–2015.

In the American Freshman survey, students agreeing they “felt depressed” was highest in the late 1980s, declined, and then rose once iGen stepped on to campuses after 2012 (see Figure 4.8 in the main text). It’s another piece of evidence suggesting that iGen’ers are faltering earlier and more completely than Millennials did: more are willing to agree with the straightforwardly honest statement that they felt depressed. Millennials said they were having trouble sleeping and remembering—signs of depression—but denied there was anything else wrong. In contrast, iGen’ers know they’re struggling, and they say so.

Among college students nationwide who sought help from the counseling center, anxiety was the most common concern (expressed by 57% of clients, according to therapists participating in the Center for Collegiate Mental Health survey). This was followed by stress, experienced by 47% of clients. Depression came in third, at 46%. Family issues, relationship problems, and academic performance all trailed at about 30%. When clinicians were asked to choose the primary concern of student clients, the most common by far was anxiety (20%), with depression a close second (16%).

For iGen’ers, virtually all of the available evidence points to more mental health issues: more high school students agree that they experience depressive symptoms such as hopelessness and feeling useless; more college students say they feel depressed and overwhelmed on the AF survey, and more say they feel anxious in the ACHA survey; more teens are suffering major depressive episodes; more say they have seriously considered or attempted suicide; the suicide rate is up. This is a very consistent picture.



**Depression: Age, Race, Socioeconomic Status, Location, and Gender**

The rise in depressive symptoms with iGen appears across all segments of society—for example, within socioeconomic status, location (urban, suburban, rural), and region (Northeast, Midwest, South, or West).



Figure F.4. Depressive symptoms, by socioeconomic status, 8th, 10th, and 12th graders. Monitoring the Future, 1991–2015.

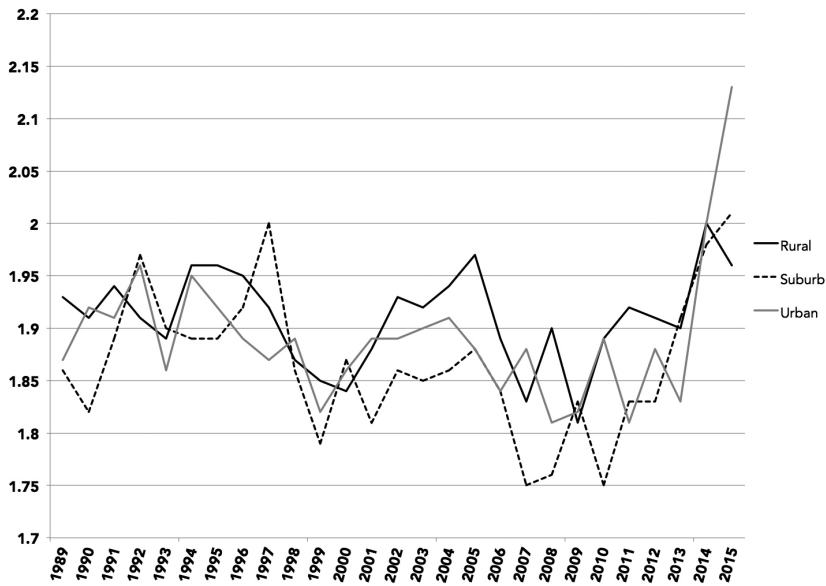


Figure F.5. Depressive symptoms, by rural, suburban, or urban location, 12th graders. Monitoring the Future, 1991–2015.

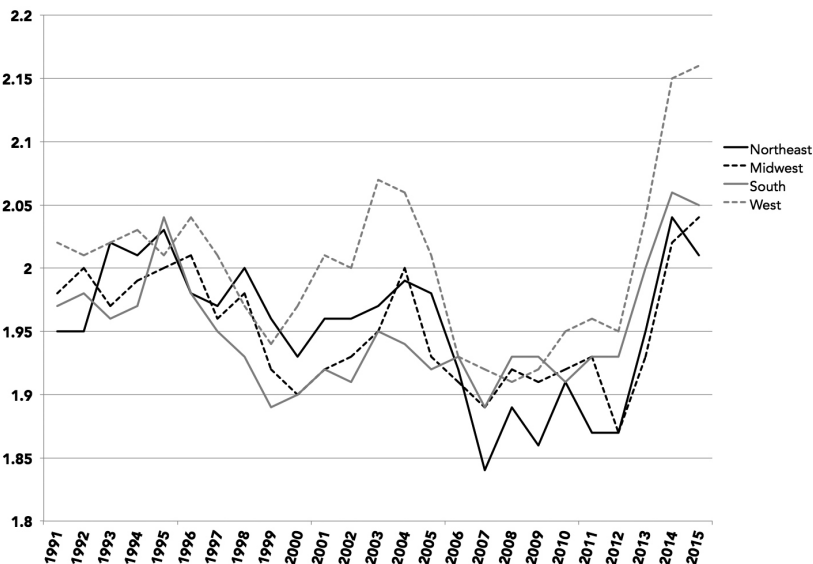


Figure F.6. Depressive symptoms, by region, 8th, 10th, and 12th graders. Monitoring the Future, 1991–2015.

The NS-DUH screening survey shows depression rising across all age groups, racial/ethnic groups, and income levels. The rise in teen depression has touched every group.



Figure F.7. Percentage of 12- to 17-year-olds experiencing a major depressive episode in the last twelve months, by age group. National Survey on Drug Abuse and Health, US Department of Health and Human Services, 2004–2015.

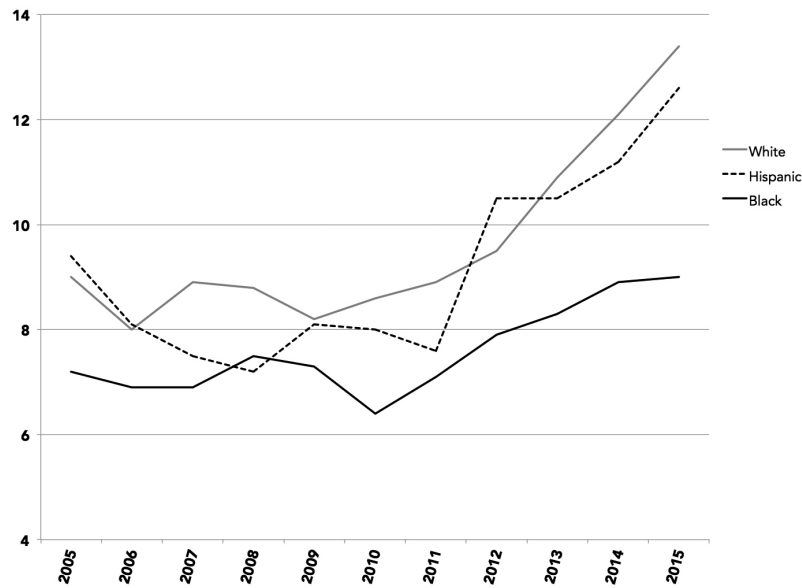


Figure F.8. Percentage of 12- to 17-year-olds experiencing a major depressive episode in the last twelve months, by race. National Survey on Drug Abuse and Health, US Department of Health and Human Services, 2004–2015.

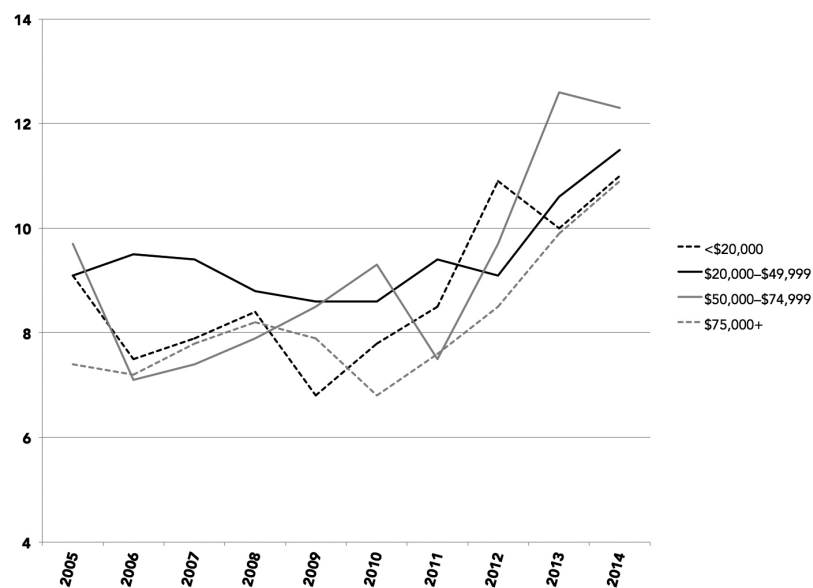


Figure F.9. Percentage of 12- to 17-year-olds experiencing a major depressive episode in the last twelve months, by income level. National Survey on Drug Abuse and Health, US Department of Health and Human Services, 2004–2014.

The YRBSS asks high school students about five major risk factors for committing suicide: feeling very sad and hopeless for two weeks, seriously considering committing suicide, making a plan to commit suicide, having attempted to commit suicide, and being injured in a suicide attempt. Boys have not changed much in these risk factors, but girls have. Feeling sad or hopeless reached all-time highs (since 1999) in 2015 for girls, as did planning suicide, attempting suicide, and being injured in a suicide attempt. After declining during the 2000s, these suicide risk factors began to rise again after 2009.

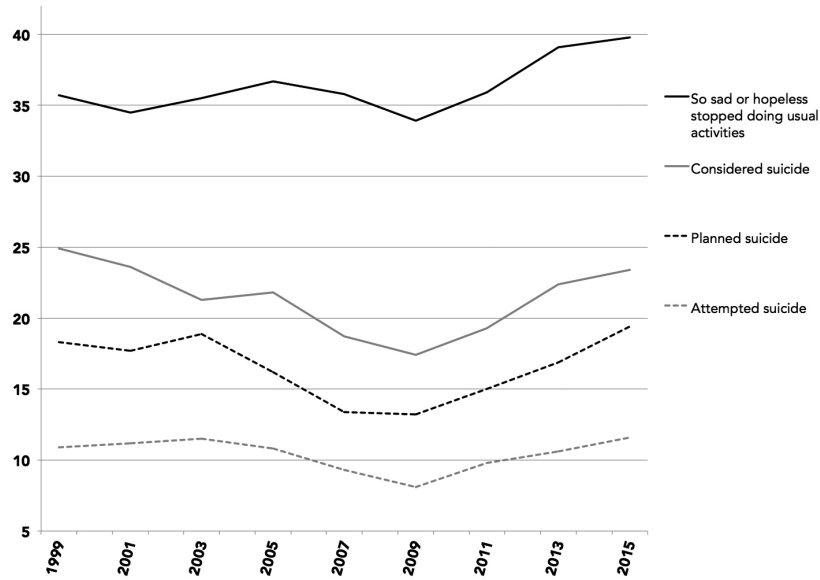


Figure F.9. Suicide risk factors, girls only, 9th-12th graders. Youth Risk Behavior Surveillance System, 1999–2015.

College students also show increases in self-injury and seriously considering suicide. Between 2011 and 2016, 30% more intentionally injured themselves, and 43% more seriously considered suicide.

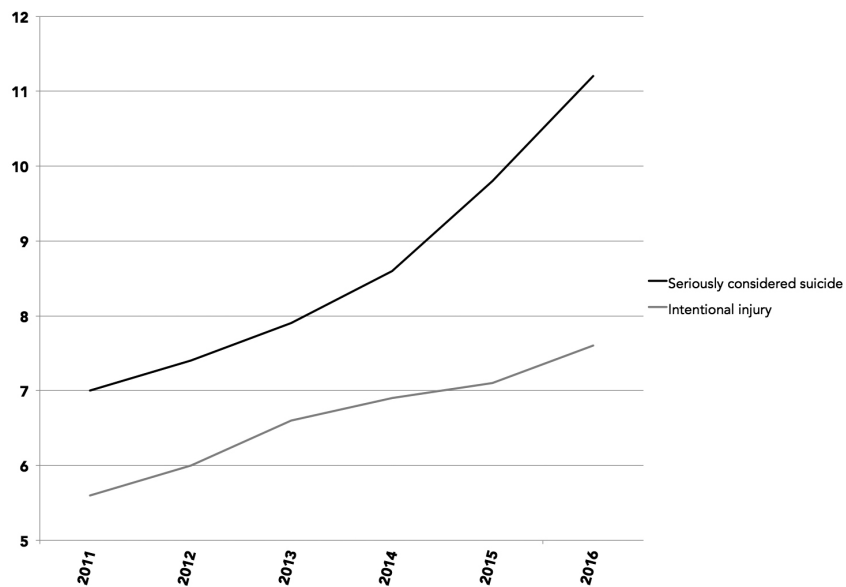


Figure F.10. Percentage of undergraduate college students who seriously considered suicide or who intentionally injured themselves in the last twelve months, 2011–2016. American College Health Association survey of approximately 400,000 students on about 100 campuses.

Teens' suicide rate has risen again.

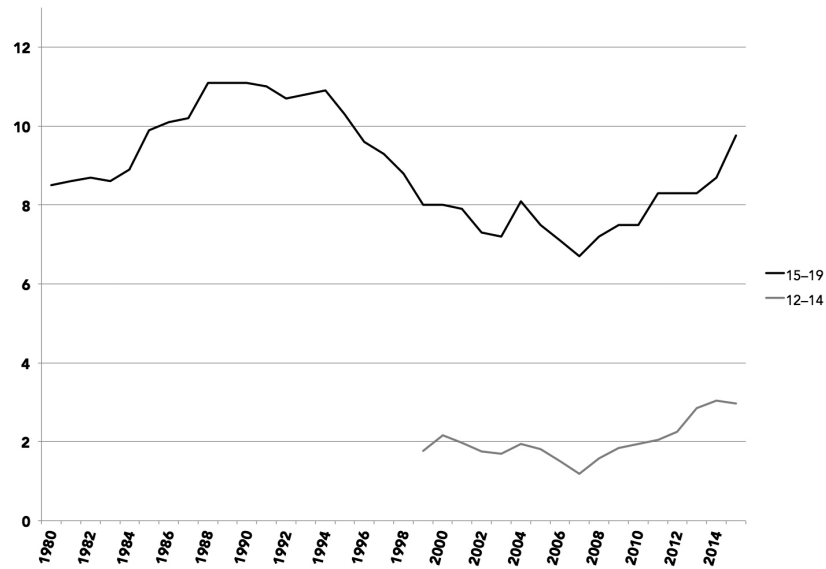


Figure F.11. Suicide rate per 100,000 population, US adolescents, CDC Fatal Injury Reports, 1980–2015.

### Losing Sleep

The recent trend toward inadequate sleep is stronger among girls than boys (see Figure F.12). That's additional evidence that it might be caused by smartphones, since girls spend more time on smartphones than boys do. However, the trends in inadequate sleep look very similar across race, socioeconomic status, and region of the country.

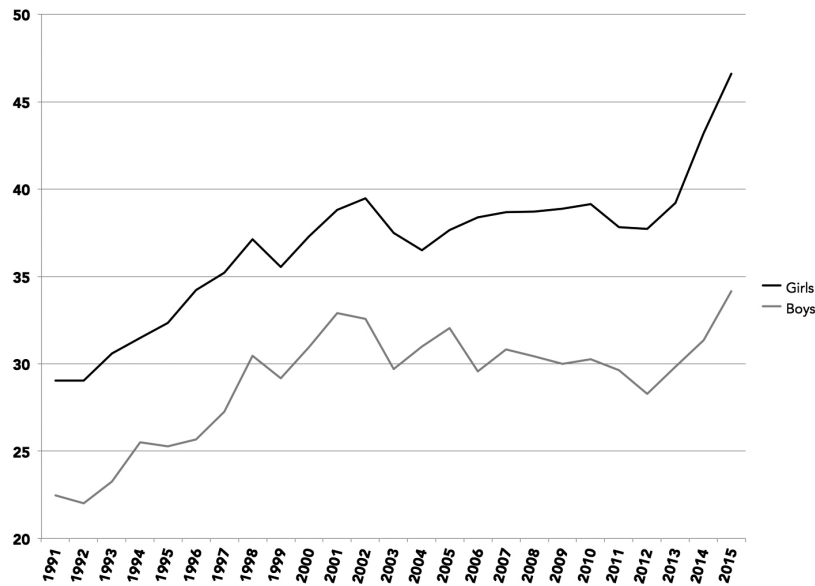


Figure F.12. Percentage of 8th, 10th, and 12th graders who get less than seven hours of sleep most nights, by sex. Monitoring the Future, 1991–2015.

The negative effects of electronic devices on sleep begin to appear after two hours of use a day.

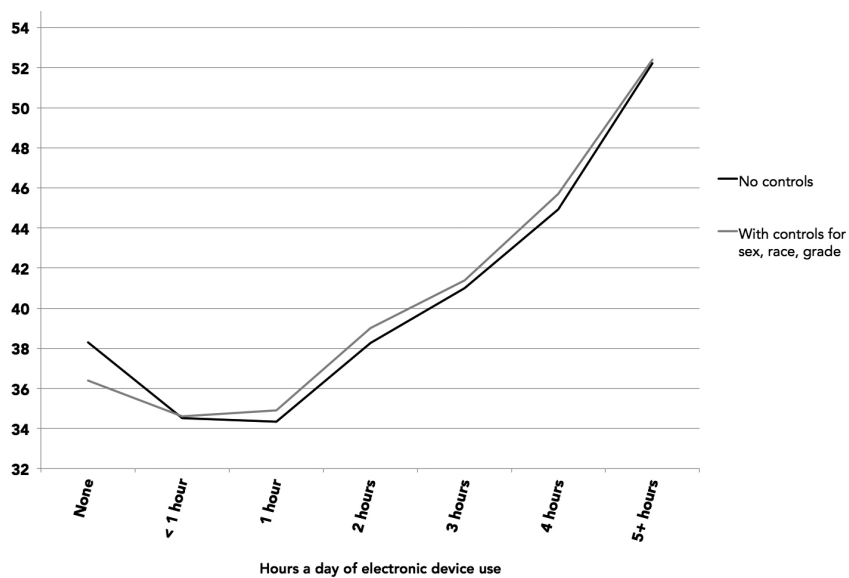


Figure F.13. Percentage of 9th to 12th graders who sleep six hours or less, by hours per day of electronic device use (exposure-response curve). Youth Risk Behavior Surveillance System, 2007–2015.

*Appendix G*

## Chapter 6 Extra Stuff

American books became much more likely to use phrases related to safety during iGen’s lifetime, as seen in the Google Books American English corpus.

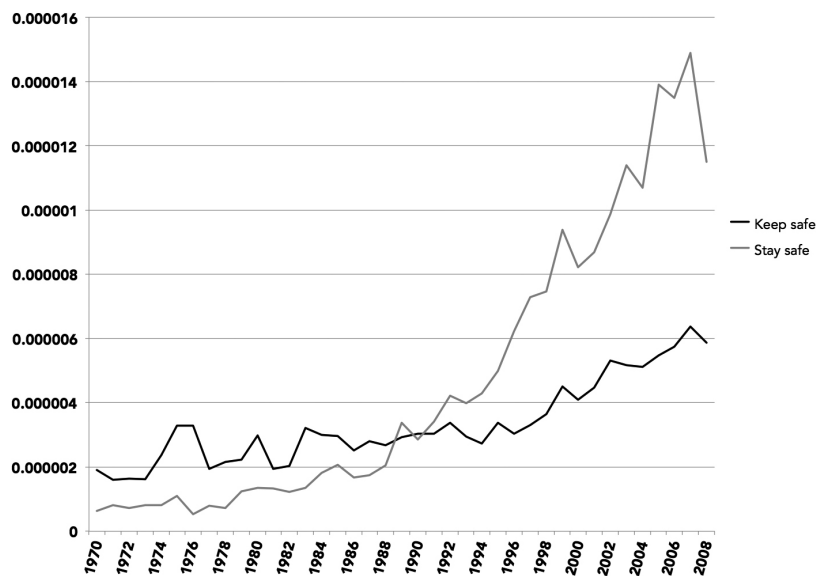


Figure G.1. Frequency of appearance of the phrases “keep safe” and “stay safe” in American books. Google Books database, 1970–2008.

Teens became much less likely to ride in a car without a seat belt or to ride with someone who was drinking.

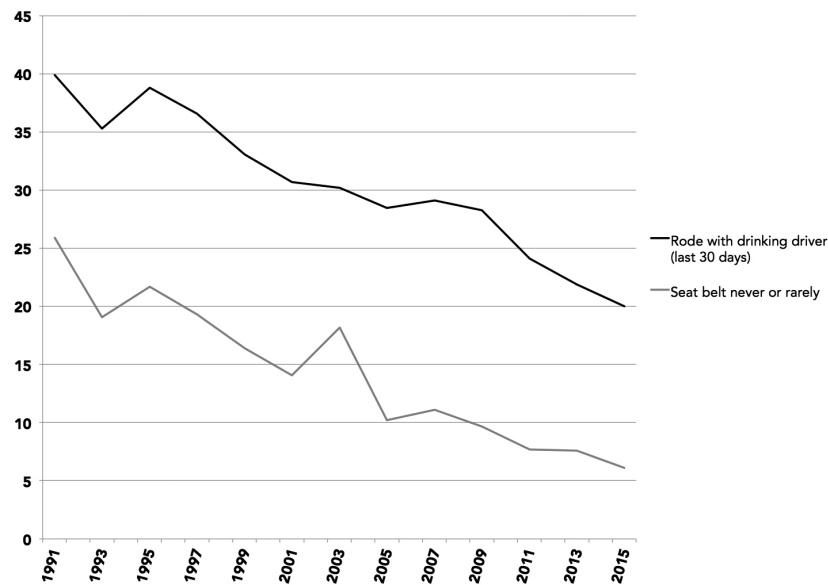


Figure G.2. Percentage of 9th to 12th graders who never or rarely wear a seat belt and who ride with a driver who has been drinking. Youth Risk Behavior Surveillance System, 1991–2015.

Teens became less likely to get into a serious fight at school or work.



Figure G.3. Percentage of 8th, 10th, and 12th graders who have gotten into a serious fight at school or work in the last twelve months. Monitoring the Future, 1976–2014.

Deaths from car accidents declined, with the biggest declines among teens and young adults.

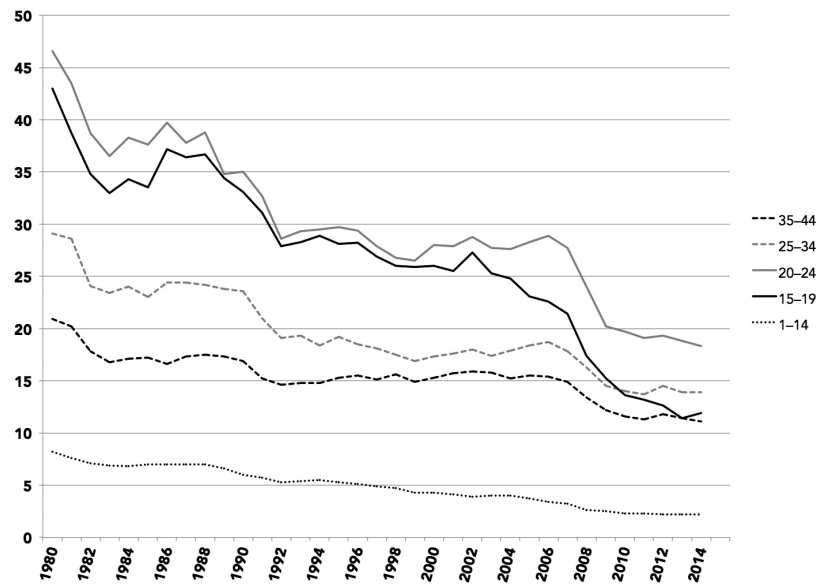


Figure G.4. Car accident death rates by age group. Centers for Disease Control and Prevention, 1980–2014.

*Appendix H*

**Chapter 8 Extra Stuff**

The decline in teen sex was especially large among black teens.

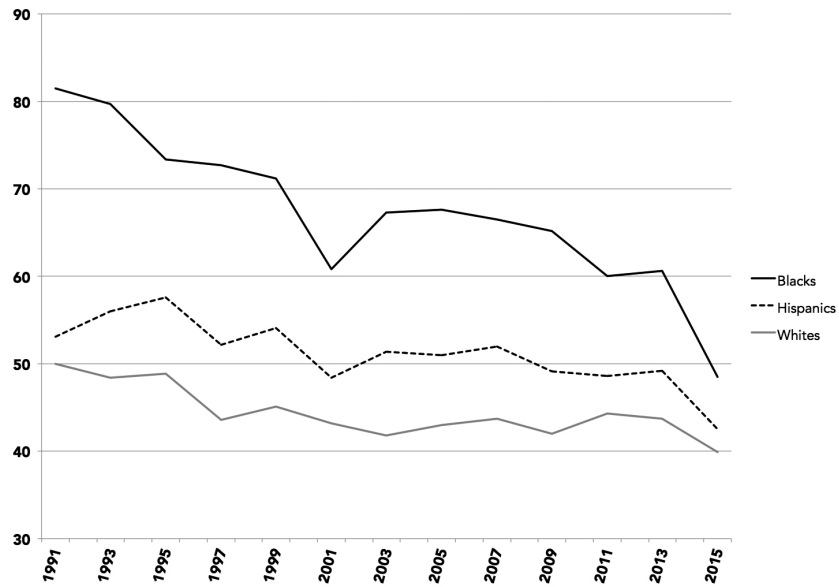


Figure H.1. Percentage of teens who have ever had sexual intercourse, by race, 1991–2015. Youth Risk Behavior Surveillance System.



Sexually transmitted diseases (STDs) are down among teens—the only age group showing a decrease in recent years.

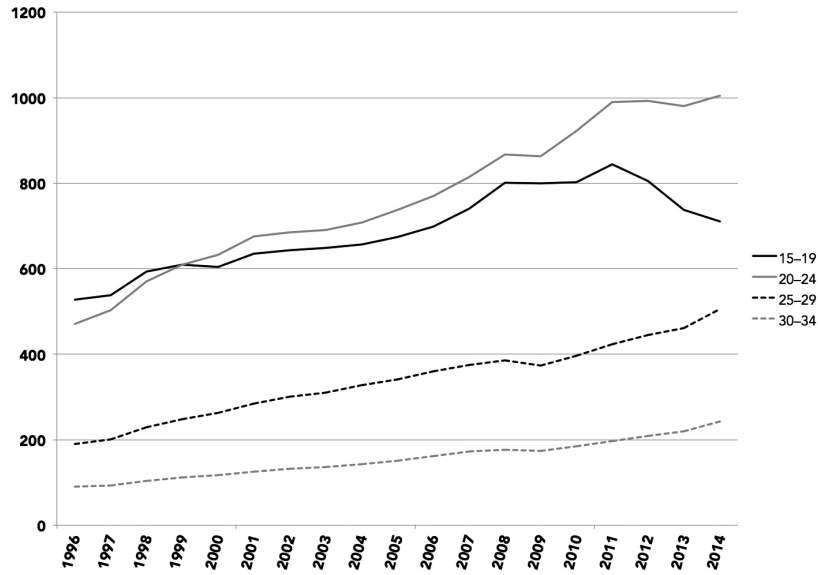


Figure H.2. Rate of sexually transmitted diseases per 100,000 population, by age group, 1996–2014. Centers for Disease Control and Prevention, WONDER data search.

Contrary to popular conceptions of there being more dads involved in raising iGen, fewer grew up with a father or stepfather (see Figure H.3). However, when dads were there, studies show they now do more child care than they once did.

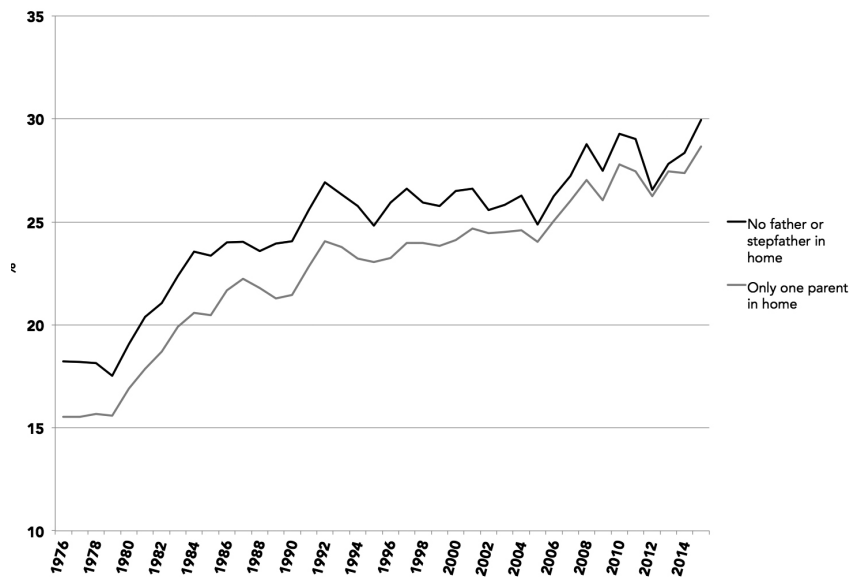


Figure H.3. Percentage of 12th graders who have less than two parents in the home. Monitoring the Future, 1976–2015.

Millenials have continued and even accelerated the trend toward getting married later (see Figure H.4), suggesting iGen will continue it as well.

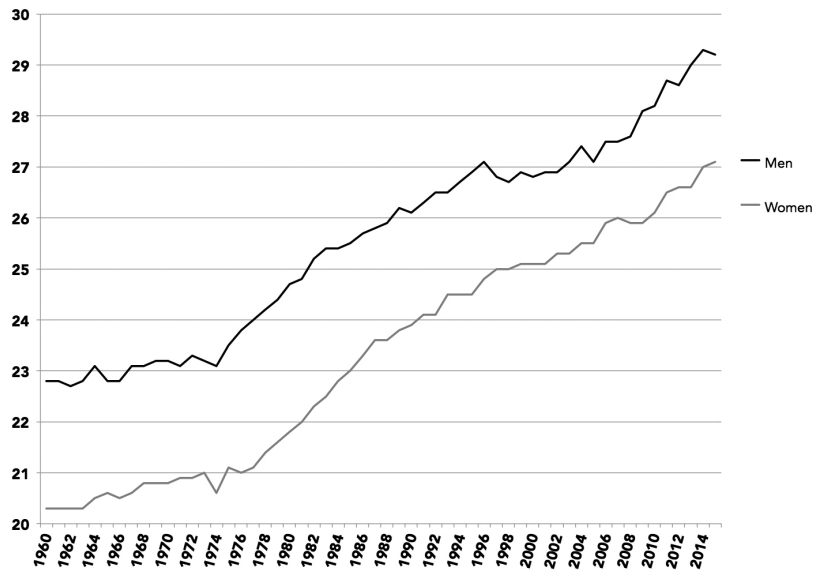


Figure H.4. Median age at first marriage for men and women. Current Population Survey, 1960–2015.

The decline in employment for young men in their 20s is not due to more going to college—college enrollment stayed fairly steady 2005–2006 when employment declined (see Figure H.5).

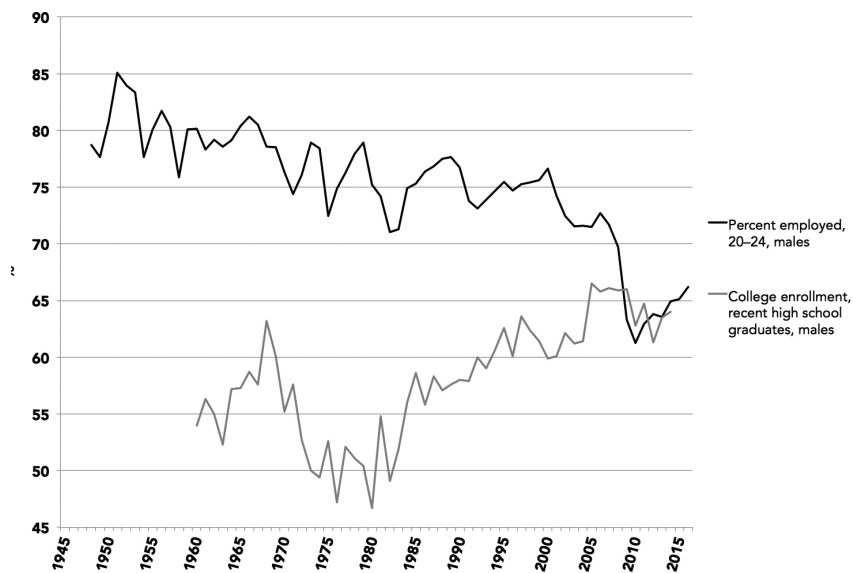


Figure H.5. Employment to population ratio, men ages 20–24, and college enrollment of recent male high school graduates, Bureau of Labor Statistics and Current Population Survey, 1948–2016.

Having children now happens later in life—fewer women in their early 20s are having babies, and more women in their late 30s are (see Figure H.6).

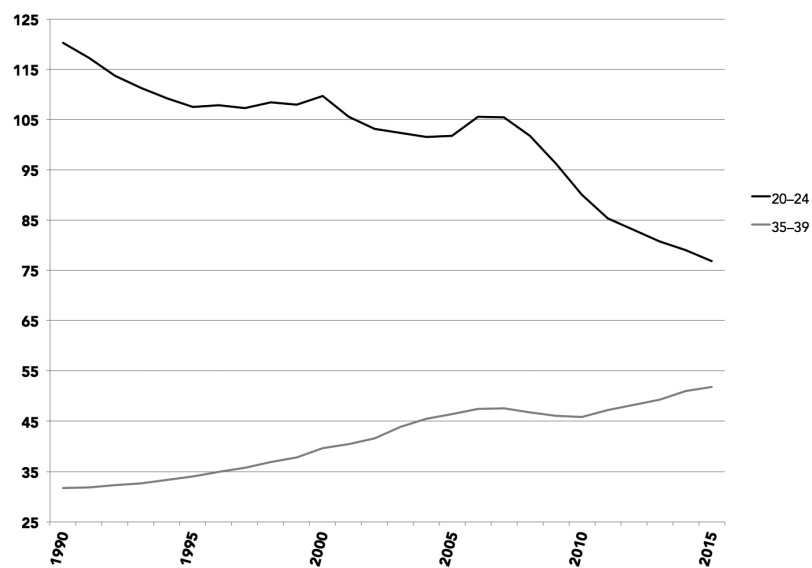


Figure H.6. Birthrates of women ages 20–24 and 35–39, 1990–2015. Centers for Disease Control and Prevention, National Center for Health Statistics.

Appendix I

Chapter 10 Extra Stuff

High school students show a significant trend toward more conservatism in recent years. The trends on the liberal-conservative dimension are somewhat different for students entering four-year colleges and universities. Here the number who describe themselves as conservative has fallen 4 percentage points from a peak in 2006, and liberals have bounced back after a slight drop in the early 2010s (see Figure I.1). Liberals don't have the almost complete domination of college campuses that they did in the Boomer 1970s; still, the recent growth in their numbers presages the protests, most centered around liberal causes, that gripped college campuses beginning in fall 2015—and the November 2016 campus protests that erupted after Donald Trump was elected president. The different trends between high school and college students captures a shift apparent in the country as a whole: whereas college graduates were once more likely to be Republicans, the base of Republican support is now those without a college education (as Trump said in 2016, “I love the poorly educated”).

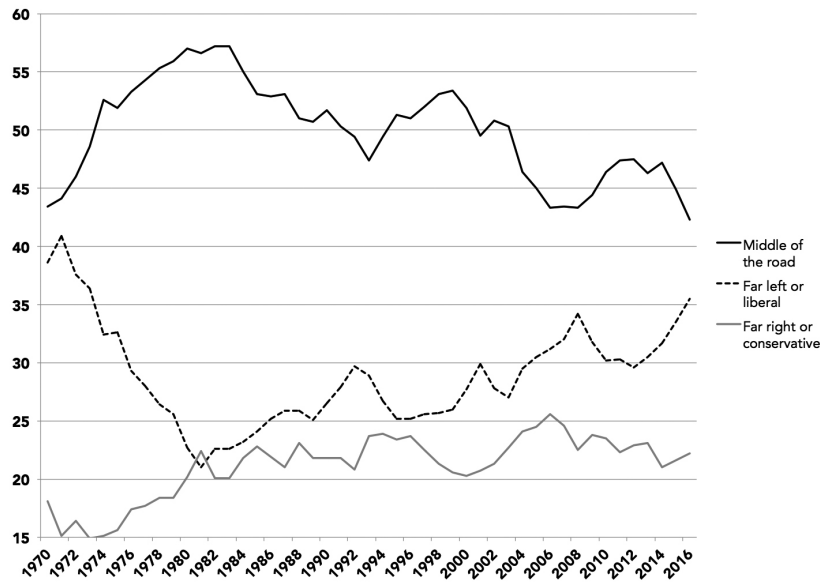


Figure I.1. Entering college students' political views. American Freshman Survey, 1970–2016.

Among high school seniors, political party affiliation and political views (liberal vs. conservative) have become more closely affiliated.

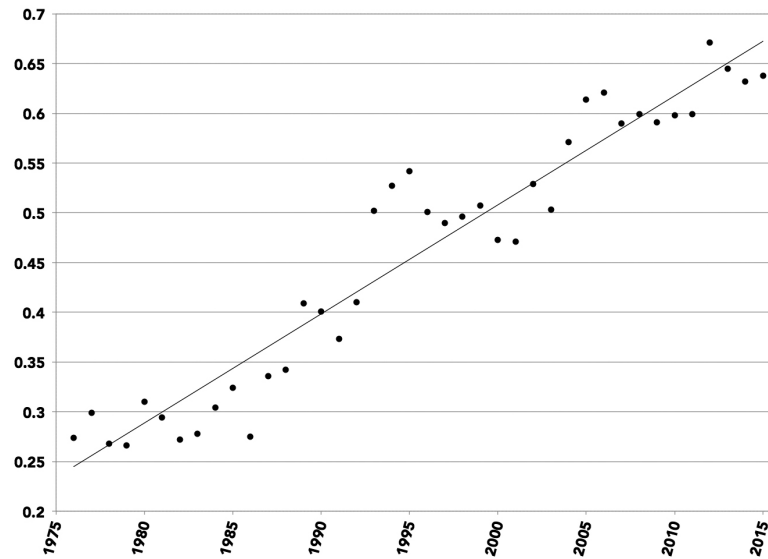


Figure I.2. Correlation between strength of political party choice (Democrats and Republicans only) and strength of political ideology (liberal, moderate, conservative), 12th graders. *Monitoring the Future*, 1976–2015.

Here's another question: Have older people also changed in their political views? As with the beliefs around equality we covered in chapter 9, it's often difficult to tell whether shifts in political views have affected all adults (a time-period effect) or just Millennials and iGen'ers (a generational effect). One way to at least partially address that is to examine the recent data (2014–2016) across several generations. When we do that, we find that iGen'ers and Millennials in their twenties and thirties were nearly twice as likely to support legal pot than those in their seventies and 15% more likely to support it than Boomers in their fifties and sixties—the former hippies and cool '70s cats who took marijuana use to all-time highs (pun intended) during their youth. Overall, the increasing support for legal marijuana is both a generational and time-period trend, though the time-period trend is stronger.

Support for legal abortion shows a very similar pattern, with the most support among the younger generations: young Millennials and iGen'ers are 22% more likely to favor legal abortion than GenX'ers, and 66% more likely than Silents. iGen'ers and Millennials are also the generations most opposed to the death penalty in recent surveys: 35% more oppose it than do GenX'ers. This suggests at least some effect for gen-

eration, with iGen'ers and Millennials (and Silents over age 70) most opposed to the death penalty and GenX'ers and the Boomers the least. Opposition to gun permits varied little with age/generation in recent years (see Figure I.3).

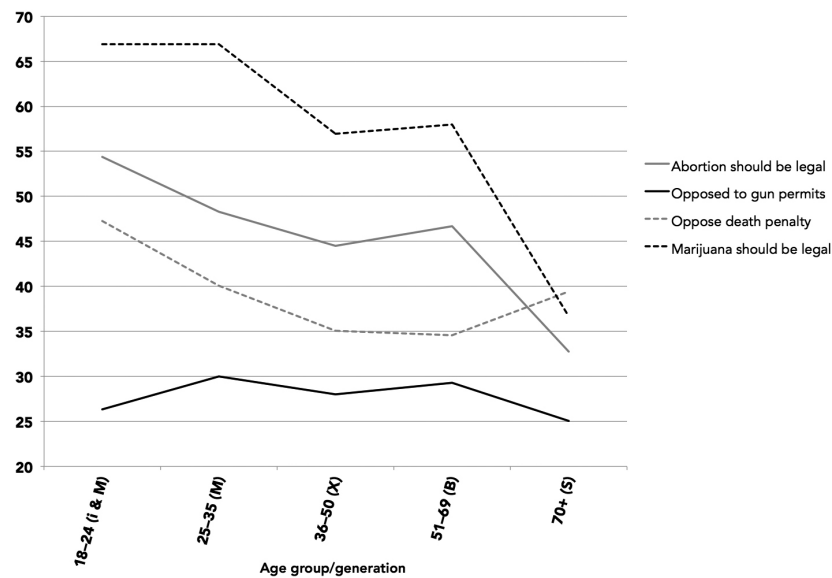


Figure I.3. Views on abortion, gun permits, the death penalty, and legal marijuana, all adults. General Social Survey, 2012–2016.

Other one-time polls find a similar pattern for gun rights: iGen'ers and Millennials are less likely to favor most gun restrictions than Boomers. In a 2015 poll by *The Economist* and YouGov, 18- to 29-year-olds were less likely than those over 65 to favor gun laws, such as restricting the sale of guns to those with a history of mental illness (by 20 percentage points), instituting a five-day waiting period for purchasing a gun (26 percentage points), banning assault weapons (14 percentage points), or having to obtain a police permit before owning a gun (17 percentage points; this is the same question asked in the General Social Survey). There were sizable gaps with 45- to 64-year-olds (GenX'ers and younger Boomers) as well. Some of this might be due to disengagement, though: many more iGen'ers and Millennials said they weren't sure of their position, leaving fewer to favor the regulations. Paradoxically, young people were actually more likely to agree with the abstract principle that "protecting people from gun violence" was more important than "the right of people to own guns" but less willing to restrict specific rights, most likely due to their libertarian view that individual rights should not be taken away by the government.

Thus those interested in appealing to young voters on gun control should focus on personal safety—one of iGen's core issues—and make a case for how gun restrictions are not detrimental to individual rights. A gun control advocate might argue that a nation without many gun restrictions deprives people of their fundamental right to be safe from being shot by someone else. This takes the individual rights argument often used by opponents of gun control and turns it around. The YouGov poll also found that young people were much less likely than those over 65 to personally own a gun (13% vs. 30%), so they might be particularly amenable to this argument. Those opposed to gun control will find that their usual arguments about individual rights will resonate with iGen.

Overall, iGen'ers are less interested in politics than their predecessors. iGen high school students are less interested in government, less likely to write to a public official, and less likely to donate to a political campaign. However, there are some signs of life when it comes to iGen and politics. Among entering college

students, between 2010 and 2016, interest in keeping up with political affairs, promoting racial understanding, and influencing the political structure rose (see Figure I.4).

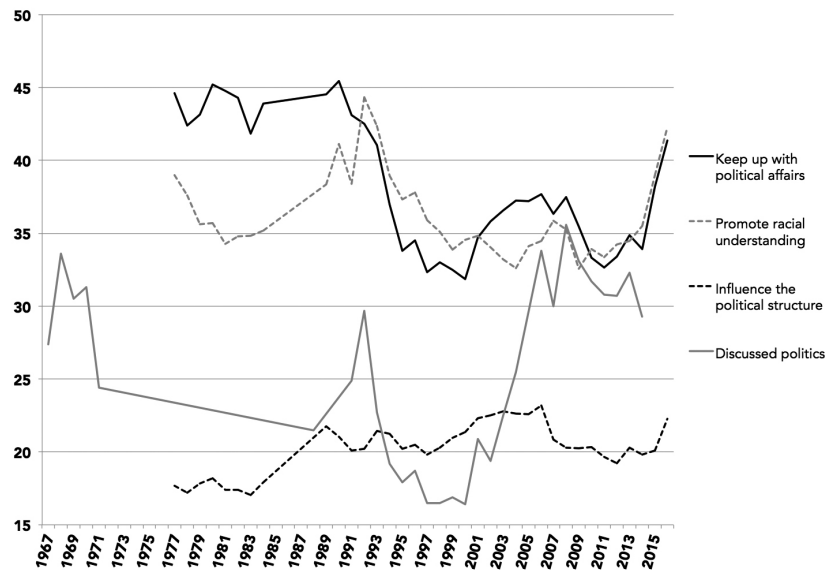


Figure I.4. Importance of political and social issues among entering college students. American Freshman Survey, 1967–2016.

However, iGen teens are less likely to consume news from several sources—the typical pattern for those interested in news (see Figure I.5).

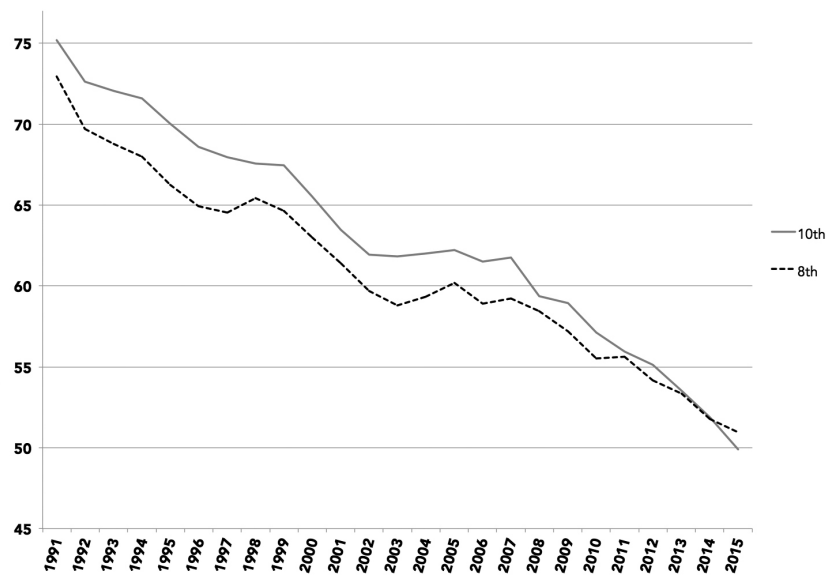


Figure I.5. Percentage of 8th and 10th graders who get the news once a week or more, averaged across radio, TV, newspapers, magazines, and (in 2004 and later) the Internet, 1991–2015.

## Notes to Appendices

The following notes section lists the journal articles discussing the data presented in the appendices. Those that are unpublished may be published by the time you read this—a Google search of the title may yield the paper. This list is roughly in order of the presentation of topics in the appendices.

- Twenge, J. M., Martin, G., & Spitzberg, B. (2017). Trends in U.S. adolescents' media use, 1976–2015: The rise of the Internet, the decline of TV, and the (near) demise of print. Unpublished manuscript.
- Twenge, J. M., Sherman, R. A., Exline, J. J., & Grubbs, J. B. (2016). Declines in American adults' religious participation and beliefs, 1972–2014. *Sage Open*, 1–13.
- Twenge, J. M., & Uhls, Y. T. (2017). Less in-person social interaction among U.S. adolescents in the 21st century and links to loneliness. Unpublished manuscript.
- Twenge, J. M., & Park, H. (in press). The decline in adult activities among U.S. adolescents, 1976–2016. *Child Development*.
- Twenge, J. M., & Campbell, W. K. (2017). Cultural individualism is linked to later onset of adult-role responsibilities across time and regions. Unpublished manuscript.
- Twenge, J. M., Joiner, T. E., Rogers, M. L., & Martin, G. E. (2017). Increases in depressive symptoms, suicide-related outcomes, and suicide rates among U.S. adolescents after 2010 and links to increased new media screen time. Unpublished manuscript.
- Twenge, J. M., Campbell, W. K., & Gentile, B. (2012). Generational increases in agentic self-evaluations among American college students, 1966–2009. *Self and Identity*, 11, 409–427.
- Twenge, J. M., Sherman, R. A., & Lyubomirsky, S. (2016). More happiness for young people and less for mature adults: Time period differences in subjective well-being in the United States, 1972–2014. *Social Psychological and Personality Science*, 7, 131–141.
- Twenge, J. M., & Campbell, W. K. (2008). Increases in positive self-views among high school students: Birth cohort changes in anticipated performance, self-satisfaction, self-liking, and self-competence. *Psychological Science*, 19, 1082–1086.
- Twenge, J. M., Konrath, S., Foster, J. D., Sherman, R., & Campbell, W. K. (2017). Egos deflating with the Great Recession: A cross-temporal meta-analysis and within-campus analysis of the Narcissistic Personality Inventory, 1982–2016. Unpublished manuscript.
- Twenge, J. M. (2015). Time period and birth cohort differences in depressive symptoms in the U.S., 1982–2013. *Social Indicators Research*, 121, 437–454.
- Twenge, J. M., Krizan, Z., & Hisler, G. (2017). Decreases in sleep duration among U.S. adolescents 1991–2015 and links to screen time. Unpublished manuscript.
- Twenge, J. M., Honeycutt, N., Prislin, R., & Sherman, R. A. (2016). More polarized but more Independent: Political party identification and ideological self-categorization among U.S. adults, college students, and late adolescents, 1970–2015. *Personality and Social Psychology Bulletin*, 42, 1364–1383.