FROM THE AUTHOR OF
Growing Up Digital

OTHER BOOKS BY DON TAPSCOTT

with Anthony D. Williams

The Naked Corporation: How the Age of Transparency
with David Ticoll

with David Ticoll and Alex Lowy

Creating Value in the Network Economy (1999)

with David Ticoll and Alex Lowy


The Digital Economy: Promise and Peril in the Age of Networked Intelligence (1996)

with Ann Cavoukian

Paradigm Shift: The New Promise of Information Technology (1992)
with Art Caston

with Del Henderson and Morley Greenberg

with Del Henderson and Morley Greenberg
heartily adopted. The marketing and publicity team was also first-rate—my sincere thanks to Amy Morse, Laura Friedman, Ann Pryor, and Gaya Vinay from McGraw-Hill, and our own team coordinated by Kasi Bruno—Jessie Brumfiel, Ian Da Silva, Ming Kwan, Derek Pokora, and Scott Waddell. Happily, my Executive Assistant of 15 years, Antoinette Schatz, was, as always, involved in everything.

Overall, my family was my most important influence. My wife, Ana Lopes, has always been a tough critic and has kept me grounded. We have discussed these ideas at length, both as parents and as collaborators in my writing. Niki and Alex Tapscott, who are now young adults, have been my inspiration and most important source of insights over the years on this topic. In a sense, they are my coauthors. I am enormously thankful and blessed.

Part One
Meet the Net Gen

INTRODUCTION

It's amazing to think how far the kids have come in the dozen or so years since I wrote Growing Up Digital. The inspiration for that book came from watching my two children use complex technologies like computers, video games, and VCRs with seemingly no effort. By 1993, my son Alex, then 7, played sophisticated games, typed class assignments on a Mac, and sent an e-mail to Santa Claus at Christmas. That same year, my 10-year-old daughter Nicole figured out how to communicate with friends on computer chat lines. She was always pushing the envelope on technology in our home, even more so than her brother. When the first browser, Mosaic, brought the World Wide Web onto the scene, they took to it like ducks to water, becoming more proficient surfers than either me or my wife Ana. When a new technology came into the house, we would often turn to the kids to figure it out.

I thought they were prodigies. Then I noticed that all their friends were just as talented. So to find out what was going on, the company I founded, now called nGenera, launched a project to study the impact of the Internet on youth in an effort to understand this unique generation. I initially assembled a team to interview 300 young people aged 20 or under, and I spent a lot of time trying to understand my own kids and their friends, especially regarding how they interacted with technology and how that might be changing the ways in which they learned, played, communicated, and even thought. In the end, Niki and Alex
weren't just subjects of my research, they became partners of sorts—even though they were still children.

THE FIRST GENERATION TO COME OF AGE IN THE DIGITAL AGE

I came to the conclusion that the defining characteristc of an entire generation was that they were the first to be “growing up digital.” In the book of the same title, written between 1996 and 1997, I named them the Net Generation. “The baby boom has an echo and it’s even louder than the original,” I wrote. They outnumbered the boomer adults, I noted, and they were different from any other generation because they were the first to grow up surrounded by digital media. “Today’s kids are so bathed in bits that they think it’s all part of the natural landscape.”

They related to technology in a different way than we boomers did. “To them the digital technology is no more intimidating than a VCR or toaster,” I said. “For the first time in history, children are more comfortable, knowledgeable, and literate than their parents with an innovation central to society. And it is through the use of the digital media that the Net Generation will develop and superimpose its culture on the rest of society. Boomers, stand back. Already these kids are learning, playing, communicating, working, and creating communities very differently than their parents. They are a force for social transformation.”

When I wrote those words, the Web had only just arrived. Technology was relatively primitive. We were still using a low-speed dial-up connection to the Internet. Although I was always first on my block to get the fastest connection possible, it was so slow you had time to get a cup of coffee while you were waiting for information to pop up. If my kids had to deal with a slow connection like that today, they’d go crazy.

It was a different world in 1997, digitally speaking. There was no Google, no Facebook, no Twitter, and no BlackBerrys. YouTube didn’t exist; you had to watch a music video on TV. I could, nonetheless, see the potential of this incredible new technology, so I speculated on the impact of the new media on youth.

People listened. Growing Up Digital was, for a while, the bestselling nonfiction book on Amazon.com and won the first ever Amazon.com bestseller award in the nonfiction category. It was translated into two dozen languages, and I shared the conclusions I had set forth in the book with literally hundreds of audiences around the world and with many millions of people through radio, television, and the print media. Many educators, as well as business and government leaders, told us that the book changed the way they manage their organizations and how they relate to youth.

Flash forward a decade—to the high-speed, interactive world that grown-up Net Geners live in. The speed of delivery on the Internet is far faster, as high-speed broadband Internet access is now common. What’s more, you can tap into a world of knowledge from far more places—from your BlackBerrys, for example, or your mobile phone, which can surf the Internet, capture GPS coordinates, take photos, and swap text messages. Just about every kid has an iPod and a personal profile on social networking sites such as Facebook, which lets Net Geners monitor their friends’ every twitch—all the time.

The Net Generation has come of age. In 2008, the eldest of the generation turned 31. The youngest turned 11. Around the world the generation is flooding into the workplace, marketplace, and every niche of society. They are bringing their demographic muscle, media smarts, purchasing power, new models of collaborating and parenting, entrepreneurship, and political power into the world.

THE DARK SIDE

But there are plenty of concerns and criticisms of this generation that are voiced by everyone from parents to frustrated employers. Many academics, journalists, and pundits present skeptical, negative, even cynical views of the Net Generation. The top 10 issues are:

- They're dumber than we were at their age. You hear different variations of this popular theme. They don't know anything, writes Mark Bauerlein in The Dumbest Generation: How the Digital Age Stupefies Young Americans and Jeopardizes Our Future. According to Bauerlein, Net Geners are a "portrait of vigorous, indiscriminate ignorance." All these gadgets can even give some people, including Net Geners, symptoms that look like attention deficit disorder, psychiatrist Edward Hallowell suggests in his book CrazyBusy. The result: a shallow, distracted generation that can't focus on anything. Then there's the full frontal attack that comes from novelist Robert Bly: "Today we are lying to ourselves about the renaissance the computer will bring. It will bring nothing. What it means is that the neo-cortex is finally eating itself." They don't read and are poor communicators. All this time online is reflected in the schools and universities where they perform badly on tests.

- They're screenagers, Net addicted, losing their social skills, and they have no time for sports or healthy activities. Time spent online could have been devoted to sports and face-to-face conversation; the result is a generation of awkward, fat people. And when they get addicted to video games, some say, the results can be worse. Mothers Against Video Game Addiction and Violence (MAVAV), for example, describes video games as "the world's fastest growing addiction and the most reckless endangerment of children today—comparable to drug and alcohol abuse."
They have no shame. "It is pretty routine these days for girls to post provocative pictures of themselves online," warns M. Gigi Durham, the thoughtful author of *The Lolita Effect.* Young people, unaware that it may come back to haunt them, merrily give out all sorts of personal information online, whether it’s to a college recruiter, a future employer, or to a manipulative marketer, cyberbully, or predator. Parents, educators, and employers are amazed when they see what kinds of digital displays of affection are posted online for the entire world to see. Kids don’t understand what the problem is!

Because their parents have coddled them, they are adrift in the world and afraid to choose a path. That’s why so many of them move home after college. They really can’t cope with the independence. Parents are often delighted, but the neighbors raise their eyebrows. Why aren’t they setting off on their own? Are they going to be coddled all their lives by helicopter parents who hover over their university professors and even their employers? According to William Damon, author of *The Path to Purpose,* “Youth are so afraid of commitment that many of them may never marry, and they’re so uncertain about picking a career that they may wind up living at home forever.” Seminars like *Spoiled Rotten: Today’s Children and How to Change Them,* by former telecommunications salesman Fred Gosman, advise parents to impose stricter codes of discipline.

They steal. They violate intellectual property rights, downloading music, swapping songs, and sharing anything they can on peer-to-peer networks with no respect for the rights of the creators or owners. "When you go online and download songs without permission, you are stealing," the Recording Industry Association of America says on its Web site. It should be a criminal offense, the recording industry says. That’s why they feel justified in suing children. The ease with which the Net Gen uses the Internet has also made them masters of plagiarism.

They’re bullying friends online. Witness the eight teens, six of them girls, who beat up a teenager in April 2008 and put it on YouTube. Here is the explanation from Glenn Beck, the controversial TV host: "Teens are living in virtual reality and a voyeuristic culture of violence and humiliation, and it’s all for fame and fortune."

The are violent. Just look at the two youths who committed mass murder in 1999 at Columbine High School near Denver, Colorado. "Absence the combination of extremely violent video games and these boys’ incredibly deep involvement, use of, and addiction to these games, and the boys’ basic personalities, these murders and this massacre would not have occurred," claims a lawsuit against computer makers lodged by the victims. According to MAVAV, the video game industry promotes "hatred, racism, sexism, and the most disturbing trend: clans and guilds, an underground video game phenomenon which closely resembles gangs."

They have no work ethic and will be bad employees. William Damon, in *The Path to Purpose,* says that students today are drifting aimlessly, with no clue as to what they want to do or become in the future. They are “slackers” who have a sense of entitlement, and as they enter the workforce they are placing all kinds of unrealistic demands on employers for everything from sophisticated technology to new approaches to management. Many companies and governments have banned social networks like Facebook because youth “love to waste their time.” They’re woefully ill-prepared for the demands of today’s (and tomorrow’s) workplace, "according to a consortium led by the Conference Board.

This is the latest narcissistic “me” generation. “They are far more narcissistic than students were 25 years ago,” says Jean Twenge, the professor who reviewed college students’ responses to the Narcissistic Personality Inventory between the early 1980s and 2006. “Current technology fuels an increase in narcissism," she said. "By its very name, MySpace encourages attention-seeking, as does YouTube.”

They don’t give a damn. They have no values and they don’t care about anyone else. Their only interests are popular culture, celebrities, and their friends. They don’t read newspapers or watch television news. They get their news from *The Daily Show with Jon Stewart* on Comedy Central. They don’t vote and are not involved in civil society. When they become adults, they will be bad citizens.

Professor Bauerlein sums it up well: “The twenty-first-century teen, connected and multi-tasked, autonomous yet peer-mindful, makes no great leap forward in human intelligence, global thinking, or netizen-ship. Young users have learned a thousand new things, no doubt. They upload and download, surf and chat, post and design, but they haven’t learned to analyze a complex text, store facts in their heads, comprehend a foreign policy decision, take lessons from history, or spell correctly. Never having recognized their responsibility to the past, they have opened a fissure in our civic foundations, and it shows in their halting passage into adulthood and citizenship.”

We should look closely at the criticisms. They’re not coming from some crazy zealots or from hardened ideologues. Robert Bly, for instance, is a mainstream, well-known, bestselling author and social commentator. While there are some interesting ideas in his writings, his hostility is so over-the-top it should cause us all to listen up.

**WHAT IS THE TRUTH?**

It’s a pretty depressing picture of this generation! And if accurate, the future is surely bleak.

To find out the truth about this generation, my company set out to conduct the most comprehensive investigation of them ever done. This $4 million research project, funded by large organizations, was conducted between 2006 and 2008. My colleagues and I have interviewed nearly 6,000 Net Generators from around the world, and while most of the research, described in over 40 reports,
is proprietary to the research sponsors, I'm going to share some of the findings and main conclusions throughout this book.

I then put together a core team that could help me take this work to the next level by creating an accessible book that I hope will have mass appeal. I've spoken to hundreds of members of the Net Generation, from the kids in my neighborhood to some of the generation's biggest stars, like Facebook founder Mark Zuckerberg and Michael Furdyk, who made his first million in the dot-com age in high school, and then launched a network called TakingITGlobal.org, comprised of over 100,000 digital activists from around the world. We created communities on Facebook and TakingITGlobal.org that would give me answers to dozens of difficult questions. We also interviewed academics, scientists, and business, education, and government leaders who have unique experiences and insights.

Not surprisingly, my two most important collaborators were my children, Niki and Alex, who spent many hours with me brainstorming, reviewing ideas, and often setting me straight. In a sense they are my coauthors, and you will read many of their insights and comments throughout the course of this book, supplementing all the hard data, case reports, and interviews.

THE NET GENERATION HAS ARRIVED
In this book you'll learn that the Net Generation has arrived. And while there are many concerns, overall the kids are more than alright.

The story that emerges from the research is an inspiring one, and it should bring us all great hope. As the first global generation ever, the Net Geners are smarter, quicker, and more tolerant of diversity than their predecessors. They care strongly about justice and the problems faced by their society and are typically engaged in some kind of civic activity at school, at work, or in their communities. Recently in the United States, hundreds of thousands of them have been inspired by Barack Obama's run for the presidency and have gotten involved in politics for the first time. This generation is engaging politically and sees democracy and government as key tools for improving the world.

With their reflexes tuned to speed and freedom, these empowered young people are beginning to transform every institution of modern life. From the workplace to the marketplace, from politics to education to the basic unit of any society, the family, they are replacing a culture of control with a culture of enablement.

Eight characteristics, or norms, describe the typical Net Gener and differentiate them from their boomer parents. They prize freedom and freedom of choice. They want to customize things, make them their own. They're natural collaborators, who enjoy a conversation, not a lecture. They'll scrutinize you and your organization. They insist on integrity. They want to have fun, even at work and at school. Speed is normal. Innovation is part of life.

CONQUERING FEAR WITH KNOWLEDGE
Why the apparent hostility toward the youth culture and its media? People become defensive when threatened by something new and which they don't understand. Historic innovations and shifts in thinking are often received with coolness, even mockery. Vested interests fight change. Just as the proponents of Newtonian physics argued against Einstein's general theory of relativity, so the leaders of traditional media are typically skeptical, at best, toward the new. Both film and print media showed considerable unease with television.

Baby boomers set a precedent of being a major generational threat to their elders. Previous generations didn't have the luxury of a prolonged adolescence; after a brief childhood, kids went straight into the workforce. But baby boomers grew up in a time of relative prosperity and attended school for many more years than did their parents. They had time to develop their own youth culture. Rock 'n' roll, long hair, protest movements, weird clothes, and new lifestyles made their parents uneasy. They also had a new medium through which to communicate their culture—television.

Now it's the boomers' turn to feel uneasy. A new generation has emerged, with new values, and it understands the new media much better than the boomers do. The situation that has developed is a classic generation gap. No wonder you see so much confusion and insecurity being shown by the boomers, not to mention all the nasty books, articles, and TV shows targeting today's youth and the Net Generation's culture and new media.

I think that, overall, the Internet has been good for them, and they will be good for us. Of all my concerns, one big one stands out. Net Geners are making a serious mistake, and most of them don't realize it. They're giving away their personal information on social networks and elsewhere and in doing so are undermining their future privacy. They tell me they don't care; it's all about sharing. But here I must speak with the voice of experience. Some day that party picture is going to bite them when they seek a senior corporate job or public office. I think they should wake up, now, and become aware of the extent to which they're sharing parts of themselves that one day they may wish they had kept private. You will also read that other concerns are more complicated and require a thoughtful response on our part, rather than the cynical and popular sport of attacking and ridiculing youth.
Most of the criticisms are founded on suspicion and fear, usually on the part of older people. Those fears are perhaps understandable. The New Web, in the hands of a technologically savvy and community-minded Net Generation, has the power to shake up society and topple authorities in many walks of life. Once information flows freely and the people have the tools to share it effectively and use it to organize themselves, life as we know it will be different. Schools, universities, stores, businesses, even politics will have to adapt to this generation's style of doing things, and in my view, that will be good. Families will have new challenges too, as their kids explore the world out there online. Life, in other words, will change, and many people find change hard.

It's only natural to fear what we don't understand.

LEARN FROM THEM AND ACT

It is my hope that this book will dispel some of the myths about this generation, revealing what they’re really like and how we can learn from them in order to change our institutions and society for the better. Perhaps employers will consider changing their HR and management practices once they see the value of tapping into the typical Net Gener’s extraordinary collaborative orientation, which has become so critical for twenty-first-century business. I hope that educators will consider altering their traditional sage-on-the-stage approach to instruction once they see how inappropriate it is for Net Gen learners. I’m pretty sure that politicians will take careful note of the novel ways that the Obama campaign has used the Internet to rally young people. I hope parents who come to my speeches because they wonder what is going on with their kids will read this book and understand their children a little better. I hope this book will reassure them and help them to realize that the digital immersion is a good thing for their kids.

What an extraordinary period in human history this is—for the first time the next generation coming of age can teach us how to ready our world for the future. The digital tools of their childhood and youth are more powerful than what exists in much of corporate America. I believe that if we listen to them and engage them, their culture of interaction, collaboration, and enablement will drive economic and social development and prepare this shrinking planet for a more secure, fair, and prosperous future. We can learn how to avoid and manage the dark side—a predictable thing with any new communications medium—more effectively.

Learn from them and you will see the new culture of high-performance work, the twenty-first-century school and college, the innovative corporation, a more open family, a democracy where citizens are engaged, and perhaps even the new, networked society.

THE NET GENERATION COMES OF AGE

Chances are you know a young person aged 11–31. You may be a parent, aunt, teacher, or manager. You've seen these young people multitasking five activities at once. You see the way they interact with the various media—say, watching movies on two-inch screens. They use their mobile phones differently. You talk on the phone and check your e-mail; to them, e-mail is old-school. They use the phone to text incessantly, surf the Web, find directions, take pictures and make videos, and collaborate. They seem to be on Facebook every chance they get, including at work. Instant messaging or Skype is always running in the background. And what's with those video games? How can someone play World of Warcraft for five hours straight?

Sure, you're as cyber-sophisticated as the next person—you shop online, use Wikipedia, and do the BlackBerry prayer throughout the day. But young people have a natural affinity for technology that seems uncanny. They instinctively turn first to the Net to communicate, understand, learn, find, and do many things. To sell a car or rent an apartment, you use the classifieds; they go to Craigslist. A good night to see a movie? You look to the newspaper to see what's playing; they go online. You watch the television news; they have RSS feeds to their favorite sources or get their news by stumbling upon it as they travel the Web. Sometimes you enjoy music; their iPods are always playing.
You consume content on the Web, but they seem to be constantly creating or changing online content. You visit YouTube to check out a video you've heard about; they go to YouTube throughout the day to find out what's new. You buy a new gadget and get out the manual. They buy a new gadget and just use it. You talk to other passengers in the car, but your kids in the back are texting each other. They seem to feast on technology and have an aptitude for all things digital that is sometimes mind-boggling.

But it's not just about how they use technology. They seem to behave, and even to be, different. As a manager, you notice that new recruits collaborate very differently than you do. They seem to have new motivations and don't have the same concept of a career that you do. As a marketer, you notice that television advertising is for the most part ineffective with young people, who seem to have mature BS detectors. As a teacher or professor, you are finding that young people seem to lack long attention spans, at least when it comes to listening to your lectures. Indeed, they show signs of learning differently, and the best of them make yesterday's cream of the crop look dull. As a parent, you see your children becoming adults and doing things you never would have dreamed of, like wanting to live at home after graduation. As a politician, you've noticed for some time that they are not interested in the political process, yet you marvel at how Barack Obama was able to engage them and ride their energy to become a presidential candidate.

You're reminded of the old Bob Dylan line “There's something happening here but you don't know what it is.”

There is something happening here. The Net Generation has come of age. Growing up digital has had a profound impact on the way this generation thinks, even changing the way their brains are wired. And although this digital immersion presents significant challenges for young people—such as dealing with a vast amount of incoming information or ensuring balance between the digital and physical worlds—their immersion has not hurt them overall. It has been positive. The generation is more tolerant of racial diversity, and is smarter and quicker than their predecessors. These young people are remaking every institution of modern life, from the workplace to the marketplace, from politics to education, and down to the basic structure of the family. Here are some of the ways in which this is occurring.

- As employees and managers, the Net Generation is approaching work collaboratively, collapsing the rigid hierarchy and forcing organizations to rethink how they recruit, compensate, develop, and supervise talent. I believe that the very idea of management is changing, with the exodus from corporations to start-ups just beginning.
- As consumers, they want to be “prosumers”—co-innovating products and services with producers. The concept of a brand is in the process of changing forever because of them.
- In education, they are forcing a change in the model of pedagogy, from a teacher-focused approach based on instruction to a student-focused model based on collaboration.
- Within the family, they have already changed the relationship between parents and children, since they are experts in something really important—the Internet.
- As citizens, the Net Generation is in the early days of transforming how government services are conceived and delivered and how we understand and decide what the basic imperatives of citizenship and democracy should be. For the growing numbers trying to achieve social change, there is a sea of change under way, ranging from civic activities to political engagement. The Net Gen is bringing political action to life more than in any previous generation.
- And in society as a whole, empowered by the global reach of the Internet, their civic activity is becoming a new, more powerful kind of social activism.

The bottom line is this: if you understand the Net Generation, you will understand the future. You will also understand how our institutions and society need to change today.

BOOM, BUST, ECHO
To begin our journey, it's important to understand some earthshaking demographic facts.

The Net Generation is a distinct generation. It is made up of the children of the post-World War II generation, called the baby boomers in the United States. This proverbial baby-boom “echo” generation, in the United States alone, is the biggest generation. Around the world there has been an even greater demographic explosion with 81 million members.

The Baby Boom (1946–64)
Anyone born between 1946 and 1964 is considered a baby boomer, and the boom was heard loudest in the United States, Canada, and Australia. Many families postponed having children until after the war, for obvious reasons. Hundreds of thousands of young men were serving overseas and were not available for fathering. When the war was over, the men came back into the workforce and the pictures of “Rosie the Riveter” that had appeared in Life magazine were
replaced with photos of cheery women in their shiny kitchens waiting for hubby to come home from work. I saw this with my own mother. She worked in a steel mill during the war, and right afterward married my dad and had me.

It is 1976. The first member of the post-World War II baby boom is 30 years old. She awakes to news reports on her clock radio about the presidential election and wonders whether she'll vote for Jimmy Carter, or the man who pardoned President Richard Nixon just two years earlier. Turning the dial, she eases into Paul McCartney's new hit, "Silly Love Songs." On her way to work as a teacher (one of the best jobs available to women in the mid-1970s), in her made-in-America car, she notices that she has a special $2 Bicentennial bill in her wallet as she pays for her gas, which cost 60 cents a gallon. After work, she decides to see why everyone is so terrified by that new blockbuster movie, *Jaws.* Still shaking as she walks out of the movie, she wonders why she isn't married yet—most of her friends are.

The economy was very strong after the war, giving families the confidence to have lots of kids. It is hard to imagine today, but by 1957 American families had an average of 3.7 children. It was a time of great hope and optimism because the Allies had won the war and there was finally peace, and prosperity was taking hold. Immigrants flooded into the United States, contributing to the population boom, and, as their children, in great numbers, matured, they grew into a powerful cultural, social, and political force. (See Figures 1.1 and 1.2.)

**The Baby Boom Became the TV Generation**

The boomers could be called the "Cold War Generation," the "Growth Economy Generation," or any other name that linked them to their era. It was really the impact of a communications revolution, however—led by the rise of television—that shaped this generation more than anything else. To say that television transformed the world around the boomers is a cliche, but it's also a vast understatement of the impact of the ubiquitous "boob tube." Imagine—or think back if you can—to the world before television. My family used to gather around the rather large piece of furniture, that was a radio, to listen to news programs and *The Lux Radio Theater.* Our own imaginations conjured up mental images of the announcers, actors, and their environments. My mother remembers that when TVs became popular, our family just had to get one. "This was the innovation of the century," she says. "It was so exciting to think that you could not only hear people who were far away, but actually see them."

In early 1953 when our first set was installed in our living room, the chairs and sofa were moved from their place near the radio and clustered around the TV. I have vivid memories of Queen Elizabeth II's coronation, which was televised on June 2, 1953, and of my mother explaining to us that the tears on Her Majesty's face were due to the emotional pressure and also the physical strain of a heavy crown and the rigor of the procession and events. I saw my parents and other adult relatives react in horror as rumors that Elvis would shake his pelvis on *The Ed Sullivan Show* were spread, and then it didn't happen. I remember my
uncle, a music teacher, howling at Kate Smith, saying that she couldn’t carry a

tune if her life depended on it. I remember Don Larson of the New York Yan­
kees pitching a no-hitter in Game Five of the 1956 World Series. I remember
Nikita Khrushchev thumping his shoe on the table at the United Nations and
watching, in real time, the shooting of Lee Harvey Oswald. And I remember
falling in love with Annette Funicello of The Mickey Mouse Club. The television
created a real-time alternate world. It also began to consume a significant part
of the day for most people.

A generation introduced to its medium grew with a momentum that swept

up the Chicago Seven with Bonanza, Bob Dylan, JFK, Harold and Maude, mari­
juana, the Vietnam War, the Beatles, and Abbie Hoffman. In 1950, only 12 per­
cent of households had a TV. By 1958, the number had soared to 83 percent.7
The medium had quickly become the most powerful communication technol­
y available, unseating radio and Hollywood films and newsreels. When the
American civil rights move ment made its demands known, it was television
that served as the messenger and the mobilizer. When the boomers marched in
the streets against the Vietnam War, television chronicled and amplified their
presence. Television was there to record and broadcast the movements of a
massive generation. Right in front of the baby boomers’ eyes, television turned
youth itself into an event.

It is 1976. The last member of the Boomer Generation has just turned 12
years old. He wakes up and scrambles downstairs to the television set. He
changes the rotary dial to PBS, which is playing Sesame Street. He eats the
breakfast Mom prepares for him and rides his bike helmetless across the
neighborhood to class. After school he rides home, lets himself into the house
with the key hidden in the garage, and waits for his mom to get home from
work. He and his friends play pickup baseball in the backyard, making up
rules as they go along.4

Gen X—The Baby Bust (1965–76)
In the 10 years following the boom, birth rates declined dramatically with
15 percent fewer babies born. Hence the name: the Baby Bust. But the term
never caught on. Instead, they’re called Generation X, after the title of a novel
by Douglas Coupland. The X refers to a group that feels excluded from society
and entered the labor force only to find that their older brothers and sisters had
filled all the positions.

Gen Xers are among the best-educated group in history. They faced some

of the highest rates of American unemployment, peaking at 10.8 percent in
November–December 1982, although the later Gen-Xers saw unemploy­
ment decline much lower. They also saw some of the lowest relative starting
salaries of any group since those entering the workforce during the 1930s
Depression era.

Gen X—now adults between the ages of 32 and 43—are aggressive commu­
icators who are extremely media-centered. They are the oldest segment
of the population whose computer and Internet habits resemble those of Net
Geners and provide the closest adult experience from which we can begin
to predict how Net Geners will master the digital universe. Like Net Geners,
Gen Xers view radio, TV, film, and the Internet as nonspecialist media,
available for everyone’s use to package information and put forward
their perspective.

The Echo of the Baby Boom—Net Generation, Gen Y, or Millennials (1977–97)
The boomers started having children in greater numbers after 1978. By 1997,
there were almost as many 5- to 9-year-olds (19,854,000) as there were 30- to
34-year-olds (20,775,000).5 See Figure 1.3.

FIGURE 1.3 DEMOGRAPHIC BREAKDOWN OF U.S.
POPULATION BY GENERATION

Source: U.S. Census Data
Four Generations: From 1946 to Present*

1. The Baby Boom Generation
   January 1946 to December 1964—19 years, producing 77.2 million children or 23 percent of the U.S. population**.

2. Generation X
   January 1965 to December 1976—12 years, producing 44.9 million children or 15 percent of the U.S. population. Also called the Baby Bust.

3. The Net Generation
   January 1977 to December 1997—21 years, producing approximately 81.1 million children or 27 percent of the U.S. population. Also called the Millennials or Generation Y.

4. Generation Next
   January 1998 to present—10 years, producing 40.1 million children or 13.4 percent of the U.S. population. Also called Generation Z.

One of the key reasons why the Net Gen has lasted so long is the number of baby-boom women who have put off having children until their thirties or forties. Relatively few boomers became parents in their early twenties, the typical age for beginning the process of marriage and child rearing. Many boomers were prolonging youth. In fact, I am a perfect example of this trend. I spent most of the first decade after college organizing various social movements, pursuing postgraduate studies, learning about computing, writing music, researching various issues, and in general trying to fathom and change the world. Planning for a family and a career was the last thing on my mind. I knew that when it was time to think about such issues, I would be just fine. Self-confidence grew from prosperous times and a rich social background.

THE ECHO BECOMES THE NET GENERATION

Each generation is exposed to a unique set of events that defines their place in history and shapes their outlook. The Echo Boomers (the Net Gen) have grown up with such defining moments as the O.J. Simpson trial, the Columbine school shootings, the Exxon Valdez oil spill, and the Gulf War. Then there is September 11, the war in Iraq, AIDS, Band Aid, and Live Aid. Influential figures are Tiger Woods, Bono, Lance Armstrong, Princess Diana, Bill and Hillary Clinton, George Bush, and Al Gore—first as the man who would be president and then as the campaigner against global warming and champion of environmental protection.

When researching Growing Up Digital, I decided to name the echo generation by their defining characteristic. Today some people call them the millennials, but the advent of the year 2000 didn’t really alter the experience of the young people of that time. I suppose we could call them “Generation Y,” but naming them as an afterthought to the smaller Gen X diminishes their importance in the big scheme of things.

If you look back over the last 20 years, clearly the most significant change affecting youth is the rise of the computer, the Internet, and other digital technologies. This is why I call the people who have grown up during this time the Net Generation, the first generation to be bathed in bits.

Broadband Internet access is now ubiquitous: iPods are everywhere; mobile phones can surf the Internet, capture GPS coordinates, take photos, and swap text messages; and social networking sites such as Facebook let Net Generators monitor their friends’ every twitch.

In 1983, only 7 percent of households owned computers. By 2004, the number had grown to 44 percent and a whopping 60 percent of those households had children. In 1996, only 15 percent of all households in the United States had access to the Internet and World Wide Web, but during the same period 1 in 10 Internet users worldwide was reported to be under 16 years of age. In 1994, 35 percent of schools provided access to the Internet in their schools.

Flash forward to today. Now, 100 percent of American schools provide Internet access, and it is estimated that there is a computer for every four schoolchildren in America. Three-quarters (75 percent) of teenagers between 15 and 17 now have mobile phones, and about 73 percent of young people aged 12 through 17 use the Internet. Broadband connections are bringing the Internet to millions of Americans every day, with 37 percent of Americans using some sort of broadband connection in 2004. Yet this progress has not closed the digital divide between those who have Internet access and those who do not. It is still an important problem. I believe it is the right of every young person to grow up digital, which is why the One Laptop Per Child campaign, launched by MIT media technology professor Nicholas Negroponte, is so wonderful and important. It deserves support from corporations, governments, foundations, and other institutions.

When I wrote Growing Up Digital, most people were using a very primitive Internet. It was low speed, often dial-up, and it was based on a programming language called HTML—a platform for the presentation of content. This is why

---

**268.9 million by the end of 1997
everyone talked about Web sites, getting lots of "eyeballs," stickiness, clicks, and page views. The Internet was about viewing content. You could visit a site and observe its information, but you couldn’t modify or interact with it or with others.

Today's Web is based on something called XML. Rather than a standard for presenting content, it is a standard for programmability—call it the "programmable Web." And every time you use it, you change it, in a sense programming a global computer. Facebook is simply one of thousands of XML-based applications that enable people to collaborate. The old Web was something you surfed for content. The new Web is a communications medium that enables people to create their own content, collaborate with others, and build communities. It has become a tool for self-organization.

We got a prophetic glimpse into the future of the Web itself. While adults were using the Internet to view Web pages, the youngsters we studied were using the Web to communicate with their friends. Their online experiences were the core of what would become the Web 2.0—a totally new and revolutionary platform for communication.

Technology Is Like the Air

While Net Gen children assimilated technology because they grew up with it, as adults we have had to accommodate it—a different and much more difficult type of learning process. With assimilation, kids came to view technology as just another part of their environment, and they soaked it up along with everything else. For many kids, using the new technology is as natural as breathing. As Andy Putschoegl is quoted as saying in Growing Up Digital, "I was born using an Apple computer."

It's much harder to teach old dogs new tricks. Learning a whole new way of communicating, accessing information, and entertaining oneself is hard work, and our established patterns of thinking must change to accommodate the new technology.

Today, most of us oldsters have a pretty good facility with technology, but you may not remember what the initial adjustment was like. When PCs first arrived, the stories about our difficulties using them proliferated; there were so many bizarre narratives, in fact, that some may have been hoaxes. One help desk reported that someone thought the mouse was a foot pedal and couldn’t get it to work. Somewhere else a secretary was asked to copy a disk and came back with a photocopy. Another person "hit" the keyboard so hard, he broke it. When asked by a support line if she had Windows, one woman apparently replied, "No, we have air-conditioning." One person was said to be found trying to delete files on a disk using Wite-Out. There were hundreds of such stories. A friend of mine tried using a mouse to point at the computer screen as if it was a TV remote. What can we learn from this? Are adults just stupid?

While laughable, the actions of these adults made sense. Boomers were familiar with TV remotes, foot pedals, photocopiers, windows, Wite-Out, and doors. Each of these artifacts had decades of meaning and behaviors associated with it. Net Generators had a cleaner slate. Absorbing the digital media was easy.

Computer visionary Alan Kay said that technology is "technology only for people who are born before it was invented." In agreement is the pioneer of learning and technology, Seymour Papert, who said: "That’s why we don’t argue about whether the piano is corrupting music with technology."

Technology has been completely transparent to the Net Gen. "It doesn’t exist. It’s like the air," said Coco Conn, cofounder of the Web-based Cityspace project. MIT’s Dr. Idit Harel, a professor of epistemology, agreed: "For the kids, it’s like using a pencil. Parents don’t talk about pencils, they talk about writing. And kids don’t talk about technology—they talk about playing, building a Web site, writing a friend, about the rain forest."

Net Gen kids growing up looked at computers in the same way boomers look at TV. Boomers don’t marvel at the technology or wonder how television transfers video and audio through thin air, we simply watch the screen. TV is a fact of life. So it has been with Net Generators and computers. And as technology relentlessly advances each month, young people just breathe it in, like improvements in the atmosphere.

Some personal experiences with my own children made this clear to me. In early 1997, I spent an hour as a guest on a Canadian television program called Pamela Wallin Live, helping to demonstrate how to surf the Web. The point of the show was to illustrate to the viewers the wealth of material available on the Net. When I returned home, my wife Ana, my most trusted critic, told me she thought the show was good, but that our son Alex, who was 12 at the time, thought the whole idea of the program was dumb.

Ana said to him: "Hey Alex, Dad’s going to be on TV live for an hour. Let’s go watch."

"Cool, what’s the show about?" Alex replied.

"Dad’s going to use the Internet on TV—surf the Web," Ana said.

"That’s the dumbest TV show I’ve ever heard of. Why would anyone want to watch Dad use the Internet?" Alex asked.

"Everyone is interested in this new technology, how to use it, and how it works. It’s a technology revolution," said Ana.

"Mom, this is so embarrassing. All my friends are going to see this. You don’t need to show people how to use Internet," said Alex.
The next day over breakfast, to hear it for myself, I asked him why he didn’t want to watch the show.

“Dad, no offense, but I think you adults are obsessed with technology. You call this a technology revolution and you are so fascinated by how the technology works. Imagine some other technology, Dad.” At this point I sensed he was going to use an analogy, and sure enough he pointed to the television. “The television—is that technology to you, Dad? Imagine a TV show where people watch you surf television! Wow! Let’s see if my dad can find a football game on television! Now my dad is going to try and find a sitcom!”

At this point his 13-year-old sister Niki came to his support (a rare thing), embellishing a point from a previous conversation.

“Yeah Dad, how about the refrigerator. Remember, it’s technology too. Why don’t we have a TV show where we can all watch you surf the fridge?” To rub it in, she said, “Check this out, my dad has found some meatloaf. This is just fascinating television!”

In another incident, Alex, then about 14, asked me to come to his room to see what he’d found. On the screen, he had a beautiful, high-resolution, full-screen color photo of Mars. It was beautiful. I told him it was spectacular and asked where he got it. “Dad, I’m looking through this thing called the Hubble Telescope.” At this point I’m thinking how incredible that my son from his bedroom is accessing one of the most sophisticated pieces of technology ever invented by humankind.

But he’s thinking something different: “Isn’t Mars amazing?”

To them, technology is like the air.

The Net Gen Media Diet

Compared with their boomer parents, time online is not time that could have been spent hanging out with their friends, playing soccer, learning the piano, or doing any of dozens of other things. More than anything, time online is time that would probably have been spent watching TV. At their age, their baby-boomer parents watched an average of 22.4 hours of television each week.13 They were passive viewers; they took what they were given, and when the commercials came, they might even have watched them.

Net Geners watch less television than their parents do, and they watch it differently. A Net Gener is more likely to turn on the computer and simultaneously interact in several different windows, talk on the telephone, listen to music, do homework, read a magazine, and watch television. TV has become like background Muzak for them.

The Net Geners don’t just take what they are given either. They are the active initiators, collaborators, organizers, readers, writers, authenticators, and even strategists, as in the case of video games. They do not just observe; they participate. They inquire, discuss, argue, play, shop, critique, investigate, ridicule, fantasize, seek, and inform.

It is 2007. The last member of the Net Generation has just turned 10 years old. After his mom wakes him up, he turns on the bedroom computer to find the latest “cheat code” for his favorite Xbox 360 game. He scrambles downstairs, where the TV is on, but he pays no attention to it, grabbing his Portable Play Station instead. The school bus, which stops at the end of every driveway, takes him the two blocks to school. After school his mother arrives in a hybrid SUV and whisks him off to a fast-food restaurant for a snack and then to his soccer game. He’s barely out of the car before his mother has sprayed a fresh coat of sunscreen on him. Dad shows up at the game at about halftime, but seems distracted by his BlackBerry. After dinner, he sits down to do homework on his laptop, while checking up on his friends via instant messaging and Facebook.

The print media company and the TV network are hierarchical organizations that reflect the values of their owners. New media, on the other hand, give control to all users. The distinction between bottom-up and top-down organizational structure is at the heart of the new generation. For the first time ever, young people have taken control of critical elements of a communications revolution.

On the Net, children have had to search for, rather than simply look at, information. This forces them to develop thinking and investigative skills—and much more. They must become critics. Which Web sites are good? How can I tell what is real and what is fictitious—whether in a data source or in the teenage movie star in a chat session?

The Net Generation is in many ways the antithesis of the TV generation. This shift from one-way broadcast media to interactive media has had a profound effect on the Net Gen.

THE FIRST GLOBAL GENERATION

The global picture is even more startling. There was no baby boom in Western Europe or Japan. The generation that survived the war produced a relatively small number of offspring and today there are proportionally fewer young people aged 11–31 in these countries. This is emerging as a huge social problem, as, among other things, a major crisis is in the making owing to the shortage of talent.

Other parts of the world, however, are experiencing a youth explosion. There are nearly as many Net Geners in China and India as there are in the United...
States and Canada. The percentage of each country’s population represented by Net Geners varies considerably from country to country. Many developed economies, for example, have large older generations whose life expectancy is climbing; while in many developing nations, life expectancy is shorter and the average age of the population is quite young. As a result, youth population is expanding more rapidly in countries like India and Brazil, and declining in nations like Japan and Spain. (See Figures 1.4, 1.5, and 1.6.)

To be sure, many of the young people in this demographic tidal wave do not have access to the Web. When I wrote Growing Up Digital, hundreds of millions more didn’t even have power. We were looking at a digital divide between information haves and have-nots. However, since then a whopping 1.3 billion people have begun using the Net, hundreds of millions of them children and young people. The global growth rate from 2000 to 2008 was 290 percent, meaning that across the world the number of people using the Internet has more than tripled! And those gains have been worldwide: there are more people on the Web in China, for example, than there are in the United States. The Net Generation has gone global. See the population pyramids for the countries with the most explosive populations in Figures 1.7–1.16.

There are surprising similarities among Net Geners in the 12 countries we studied.

Measured by communications and cultural trends, today’s youth inhabit a flattening world. Digital technologies make it as easy to send an instant message to an acquaintance thousands of miles away as to a next-door neighbor. The technical infrastructure is rapidly shrinking the world.

"For the first time ever, we can speak of a worldwide youth generation."

—JOHN GERACI, PROJECT MANAGER, THE NET GENERATION RESEARCH

What makes the Net Generation unique?

More than anything else, the Internet and its global reach. A true global generation of youth is emerging. Technical barriers are falling, which is “flattening”
the world, as *New York Times* columnist Thomas Friedman puts it, enabling global communication like never before. With the rise of the Internet, the distinct localized characteristics specific to young people are somehow fading. Yes, countries and regions will still have unique cultures and independent features, but increasingly young people around the world are becoming very much alike. As you will see, they have similar generational attitudes, norms, and behaviors.

To be sure, we’re in the early days of such a global generation. Technologies are not distributed equally or equitably, and digital divides are quite pronounced.
in many countries. The Western reverence for the young that has emerged over the past half century is not necessarily shared in the East, which tends to revere its older generations. Growth in the youth population and economic opportunity are most apparent in the East (see Figure 1.17). However, pop culture remains America's most efficient export. And Western pop culture is driven by the needs of the Western Net Gen, and technology is more and more a part of it. So, although the demographic epicenter of the global Net Gen is in Asia, the driving forces that influence the generation, worldwide, reside in the West.

The Generation Lap Revisited

In the 1960s and '70s, there were big differences between boomer kids and parents over values, lifestyle, and ideas. But now, boomers get along pretty well with their kids. Just look at your iPod and your Net Gener's iPods—there is big overlap in music. When I was young, hardly any parents liked the Beatles, let alone the Doors. Today, instead of a gap, there is a "generation lap"—kids are outpacing and overtaking adults on the technology track, "lapping" them in many areas of daily life.

"For once in our civilization, children are educating older people. Adults are looking to children for information and help with computers and other computer-related stuff.

—AUSTIN LOCKE, 15

Brown, director emeritus at Xerox PARC and a visiting scholar at The Annenberg Center at University of South California. In the past, the parents were the authority figures when it came to anything of real value. The notion that the child might be able to do anything new, novel, or really useful for the parent was considered bogus. "So for the first time there are things that parents want to be able to know about and do, where the kids are, in fact, the authority," Brown says.

Society has never before experienced en masse this phenomenon of the knowledge hierarchy being so effectively flipped on its head. But it is definitely happening, and the situation has magnified over the years with the appearance of each new technology—such as mobile devices and social networks.

The implications are huge. In some families, members have begun to respect each other as the authorities they actually are. This has created a more engaged dynamic within families. If managed well by the parents, this dynamic can create a more open, consensual, and effective family unit.

This diffusion of parental authority has spread beyond the family home. Consider the changing relationship between students and teachers in Finland. The government has chosen 5,000 Net Geners to train the country's teachers in how to use computers. For the first time ever, in one domain, the students will be the teachers and the teachers will be the students. The power dynamic between students and teachers will be forever altered.

Imagine what will happen when this tech-savvy generation moves into the workforce, where many managers, especially in Europe and Japan, make little personal use of the Internet. Will Net Geners be satisfied with the old hierarchical model of the enterprise? The successful companies will be those that recognize that networked structures work more effectively than old-fashioned hierarchies. Peer collaboration drives innovation and new approaches to management and government.

Generational versus Life-Stage Differences

In Growing Up Digital, I made a number of hypotheses—arguing that spending time online rather than being the passive recipients of television was probably affecting the brain development of Net Geners. In the last dozen years, we have learned more about this complex topic, and I have come to the conclusion that Net Geners' brains have indeed developed differently than those of their parents.

Some pundits have criticized my work with young people on the grounds that the differences I have observed between the Net Generation and their parents are life-stage, not generational differences. At first blush, their argument may seem like a convincing one: "Hey, the boomers were different from their parents. They protested war and then grew up and voted for George W. Bush." Won't the same thing happen to the Net Geners?

There are many reasons to believe that what we are seeing is the first case of a generation that is growing up with brains that are wired differently from those of the previous generation. Evidence is mounting that Net Geners process information and behave differently because they have indeed developed brains that are functionally different than those of their parents. They're quicker, for example, to process fast-moving images than their parents are. This view is not one I developed as a layperson (although a little-known fact is that I began my career many years ago as a psychologist). It comes from research done for my company by two of the smartest brain scientists I know—Stanley Kutcher and his son Matthew. The Kutchers describe how time spent with digital technologies may be changing the physical structure and functioning of their developing
brains. There are two critical periods of brain development during which our brains get wired and developed. The first is early childhood, say from birth to three years old. It's likely that Net Geners got more stimulation during this period than did their boomer parents. The boomers had more children, and each probably received less attention. Nannies were less popular in the '50s and early '60s when the boomers were babies, and there was less emphasis on early childhood education.

The second critical period of brain development occurs roughly during the adolescent and teenage years. During that period the boomers as kids were watching a lot of television—between 20 and 30 hours a week. Contrast this with Net Geners, who spend an equivalent amount of time as active users of media rather than as passive viewers. It's logical to hypothesize that this affects brain development, because how one spends one's time during this period shapes one's brain. In the chapters that follow, you will read about a number of different ways in which Net Geners input data from the world, process information, learn, think, and communicate—but suffice to say here that pretty much all of this is positive.

Consider the impact of their rich, interactive media environment. When I was a kid growing up in a small town, there were three television stations, a small-town library, one newspaper, and a couple of magazines that interested me. Today's youth in the United States have access to 200-plus cable television networks, 5,500 magazines, 10,500 radio stations, and 40 billion Web pages. In addition, there are 22,000 books published every year; 240 million television sets are in operation throughout the country, and there are even 2 million TV sets in bathrooms. This generation has been flooded with information, and learning to access, sort, categorize, and remember it all has enhanced their intelligence.

The Smartest Generation

The evidence is strong that they are the smartest generation ever. More students are challenging themselves: the number of students taking AP exams has more than doubled between 1997 and 2005. Raw IQ scores are climbing too, by three points a decade since World War II, and they have been increasing across racial, income, and regional boundaries.

This generation even thinks it's cool to be smart, and they see themselves as an essential part of the world's future success. Teens rank "scientists" and "young people" as the two groups that will cause the "most changes for the better in the future." When we asked our global sample of thousands of Net Geners, "Which would you rather be, smart or good-looking," 7 out of 10 chose having smarts.

A New Family Org Chart

The Net Gen's values were shaped not only by technology but by their parents. In the United States, the boomers' parents believed in the old maxim "Spare the rod and spoil the child," and as a young person there was nothing I dreaded more than being strapped by a parent or teacher. If there had been a family "organizational chart" like those that most companies have today, it would have indicated that boomer kids reported to their mother who reported to their father. But when the boomers had kids, they created a different kind of org chart with the child at the center. Many Net Geners were raised in kind and supportive families, where kids and parents got along well. The pejorative term for this is "being coddled," and it's true that sometimes it went too far—think of the "helicopter parents," who hover like a Sikorsky Blackhawk over their children, even at the university.

In fairness to the boomers, you can understand why they're hyped about their kids' education. Not only is education their children's key to the future in a knowledge economy; sending a child to school is expensive. In addition to the tens of thousands of dollars a year in tuition, some parents also invest up to $40,000 on university prep courses. One New Jersey father of two paid $30,000 to a college counselor for advice on everything from course selection to summer planning. Including school expenses, the average American receives $38,000 a year from her or his parents between the ages of 18 and 34.

Some Sikorsky parents have even helicoptered their way into their children's job interviews and performance reviews. Smart companies are trying to determine strategies to deal with helicopter parents without alienating their Net Gen children.

Family is a big deal for today's youth—much more so than for their boomer parents. They listen to their parents' opinions on everything from college selection to financial planning, and banks like Citibank have taken note, waiving all fees on accounts that parents open for their children. My parents didn't even know what universities I was applying to. But both my children sought out my opinion when they were debating what schools they should apply to. Net Gen teens and young adults travel more with their parents than boomers did, and after college even choose to live at home for a while. To anyone in my generation, moving back in with your parents once you had left home would have been unthinkable. But now, most young people and their parents get along well.
Generational Values

When I wrote Growing Up Digital, I analyzed books and articles about the young generation. It was a sad tale. Young people were said to be self-centered and obsessed with short-term gratification. One analyst wrote: “. . . many baby boomer parents are so concerned with building youngsters’ self-esteem, protecting them from stress, and making them partners in the family that they are raising a generation of selfish, ill-mannered, troubled children.” Books like Spoiled Rotten: Today’s Children and How to Change Them, by Fred Gosman, advised parents to impose stricter codes of discipline. Youth crime was said to be rampant, and the generation’s so-called materialism and impulsiveness entered into experts’ analysis of youth crime. Charles Ewing, a juvenile-crime expert at the University of Buffalo, said: “Juveniles have little impulse control, and a gun is an impulsive weapon.” They were alleged to be greedy, self-centered, intolerant, and narcissistic; to have an inflated sense of self, a sense of entitlement, and unrealistic expectations; and to be concerned only about their own possessions and financial success.

At the time, I argued that the data did not support these views. Flash forward to today—it still doesn’t. While there are important differences across cultures, nations, genders, and classes, the evidence is strong that this is a positive generation, with strong values. Take young people in North America—they care about the world. They are open, tolerant, and the least prejudiced generation ever. And, not surprisingly, when asked if they felt that young people were too negatively portrayed in the media, a majority—in the United States two-thirds—agreed.

These varied experiences have shaped the early lives of Net Geners, and 9 in 10 Net Geners in the United States describe themselves as “happy,” “confident,” and “positive.” An increasing number of Net Geners believe growing up is easier for them than it was for their parents. A rapidly shrinking group worries about violence, sex, and drugs. Teen suicide rates have been generally falling since the 1990s. Over the last 10 to 20 years, rates of homicide, violent crime, abortion, and pregnancy among U.S. teens have all plummeted. Drug use and alcohol use by teens has been dropping pretty much for a decade. The stereotype on crime is wrong, too. A teen is less likely today to be a victim of a serious violent crime than at any time since the late 1960s.

Net Geners display considerable tolerance compared with previous generations. The world around them has changed. (See Figure 1.18.)

When I was a teenager, my closest friends were all white males who were of exactly the same age. Today, males aged 18–21 in the United States report that 20 percent of their best friends are more than two years younger; 33 percent, more than two years older; 49 percent, from a different racial and/or ethnic background; and 60 percent, from the opposite sex. What a stunning transformation!

Waves of immigration have created an increasingly multiracial American population, and “the younger the age group, the more diverse the population,” says Gregory Spencer, who heads the Census Bureau’s Population Projections Branch. A disproportionate number of mixed-race Americans are young: census results show that those under 18 are twice as likely as adults to be classified as multiracial. The ease with which young people of different races and ethnicities mingle and marry also differentiates Net Gen from earlier generations: 91 percent of Net Gen respondents agree that interracial dating is acceptable, compared with 50 percent of the G.I. Generation (which reached adulthood during World War II), who express this view.

It is 2008. The first member of the Net Generation is 31 years old. She awakes to news reports of the war in Iraq and wonders how President Bush’s proposed immigration policy will affect the employment status of her Hispanic friends. On her iPod, she plays her “morning mix,” which contains songs from 10 different music genres. On her way to work as a marketing manager in her Japanese-made hybrid, she wonders if this will be the day that gas hits $5 a gallon. U.S. Census Population counts for 2006 put the population of those Americans over 80 to be approximately 4 percent of the population, or about 12 million people.
Of course the story is not completely positive. As with any generation, there are troubling issues. Is being totally immersed in the online world a good thing for everyone? What about balance in a young person’s life, and do some kids spend too much time online and multitasking? Are too many of them stressed out from heavy workloads and college application processes? Does the Internet make it easier to plagiarize or cheat in other ways at school? Are their attitudes and norms positive as they enter the workforce, marketplace, society? Until recently they have not been voting in elections, so what does this mean for the future of democracy? What about privacy? They spill their guts online and sometimes seem oblivious to how this could come back to haunt them. These issues will all be discussed throughout the book.

**THE EIGHT NET GENERATION NORMS**

If Wonder bread builds strong bodies in 12 ways, this generation is different from its parents in 8 ways. We call these 8 differentiating characteristics the Net Generation Norms. Each norm is a cluster of attitudes and behaviors that define the generation. These norms are central to understanding how this generation is changing work, markets, learning, the family, and society. You’ll read about them throughout the book.

- They want **freedom** in everything they do, from freedom of choice to freedom of expression. We all love freedom, but not like this generation. Choice is like oxygen to them. While older generations feel overwhelmed by the proliferation of sales channels, product types, and brands, the Net Gen takes it for granted. Net Geners leverage technology to cut through the clutter and find the marketing message that fits their needs. They also expect to choose where and when they work. They use technology to escape traditional office constraints and integrate their work lives with their home and social lives. Net Geners seek the freedom to change jobs, freedom to take their own path, and to express themselves.

- They love to **customize**, personalize. When I was a kid, I never got to customize *The Mickey Mouse Club*. Today’s youth can change the media world around them—their desktop, Web site, ring tone, handle, screen saver, news sources, and entertainment. They have grown up getting what media they want, when they want it, and being able to change it. Millions around the world don’t just access the Web, they are creating it by creating online content. Now the need to customize is extending beyond the digital world to just about everything they touch. Forget standard job descriptions and only one variety of product. As for government portals, they want “my government” customized online.

- They are the new **scrutinizers**. When I was young, a picture was a picture. No more. Transparency, namely stakeholder access to pertinent information about companies and their offerings, just seems natural to the Net Gen. While older generations marvel at the consumer research available on the Internet, the Net Gen expects it. As they grow older, their online engagement increases. Businesses targeting the Net Gen should expect and welcome intense scrutiny of its products, promotional efforts, and corporate practices. The Net Gen knows that their market power allows them to demand more of companies, which goes for employers as well.

- They look for **corporate integrity and openness** when deciding what to buy and where to work. The Internet, and other information and communication technologies, strip away the barriers between companies and their various constituencies, including consumers, activists, and shareholders. Whether consumers are exposing a flawed viral marketing campaign or researching a future employer, Net Geners make sure company values align with their own.

- The Net Gen wants **entertainment and play** in their work, education, and social life. This generation brings a playful mentality to work. From their experience in the latest video game, they know that there’s always more than one way to achieve a goal. This outside-the-box thinking results from 82 percent of American children aged 2 to 17 having regular access to video games. It's a fast-growing industry: in the United States, video game sales were $8.4 billion in 2005, with worldwide sales expected to hit $46.5 billion by 2010. This is a generation that has been bred on interactive experiences. Brand recognition alone is no longer enough, something leading companies recognize.

- They are the collaboration and relationship generation. Today, youth collaborate on Facebook, play multiplayer video games; text each other incessantly; and share files for school, work, or just for fun. As evidenced by sites such as Yub.com, they also engage in relationship- oriented purchasing. Nine out of ten young people we interviewed said that if a best friend recommends a product, they are likely to buy it. They influence each other through what we call N-fluence Networks—online networks of Net Geners who, among other things, discuss brands, companies, products, and services.

- The Net Gen has a need for speed—and not just in video games. Real-time chats with a database of global contacts have made rapid communication the new norm for the Net Generation. In a world where speed characterizes the flow of information among vast networks of people, communication with friends, colleagues, and superiors takes place faster than ever. And marketers
and employers should realize that Net Generers expect the same quick
communication from others—every instant message should draw an instant
response.

- They are the innovators. When I was young, the pace of innovation was glacial.
Today it's on hyperdrive. A twentysomething in the workforce wants the new
BlackBerry, Palm, or iPhone not because the old one is no longer cool, but
because the new one does so much more. They seek innovative companies as
employers and are constantly looking for innovative ways to collaborate,
entertain themselves, learn, and work.

Creating the Future

The famous communications philosopher Marshall McLuhan viewed language
assembled into a book as a probe. He said, "When information is brushed
against information the results are startling and effective." Which is why I love
writing books and why I was so excited when Growing Up Digital was
published. It probed the idea that for the first time in history, we can
must do from children. The experience of the last dozen years has, in my view,
shown this to be true.

As talent, the Net Generation is already transforming the workforce. The
biggest generation ever is flooding into a talent vortex being created by the
expansion of the global economy, the mobility of labor, and the fastest and
biggest generational retirement ever. They are bringing new approaches to col­
laboration, knowledge sharing, and innovation in businesses and governments
around the world. There is strong evidence that the organizations that embrace
these new ways of working experience better performance, growth, and suc­
tess. To win the battle for talent, organizations need to rethink many aspects of
how they recruit, compensate, develop, collaborate with, and supervise talent. I
believe the very idea of management is changing.

As consumers, the Net Generers are transforming markets and marketing, not
just because they have huge purchasing power and influence. They also value
different characteristics of products and services, and they want companies to
create rich experiences. They influence each other and other generations in new
ways, and traditional media are ineffective in reaching them. Only 2 percent of
our sample indicated high trust in the ad campaigns of marketers. The old saw,
"Half my ads are effective; I just don't know which half," isn't real any more, as
a majority of ads on television are deleted and never appear to growing
millions of young people around the world. Instead of consumers, they want to be
prosumers—co-innovating products and services with producers. The concept

of a brand is forever changing because of them. Companies can now under­
stand how to redesign a total customer experience for the twenty-first century
from R&D through to customer support, by learning from them.

Until recently, they have been disengaged from formal politics, preferring
to be involved in civic activity in their communities, or in working behind
the scenes to solve global problems. But 2008 was the year they entered for­
mal political life, and exercised their
power by launching Barak Obama as
the Democratic contender for the
U.S. presidency. I believe the Net
Generers' experience in this election
campaign will not stop on Election
Day. They won't settle for a passive
role in politics or in government.

They are already placing demands on our political institutions in order to
engage them. I believe they will insist on changes to the way governments are
run, too. They see that checking into a hotel or renting a car can be done in 30
seconds, and wonder why it takes governments weeks to do a similar activity.
Broadcast democracy was fine for the TV generation. Not for them.

Will their civic activity around the world become a new kind of activism?
Will they rise to the challenges of deepening problems that my generation is
handing to them? Never has there been a time of greater promise or peril. The
challenge of achieving that promise and in so doing saving our fragile planet
will rest with the Net Generation. Our responsibility to them is to give them the
tools and opportunity to fulfill their destiny.

The Net Generation, the biggest ever, is coming of age. As they go to college
and begin jobs, Net Generers are beginning to use remarkable digital tools that
give individuals the power that in the past was reserved for the authorities.
They're the first global generation, and around the world they share many of the
eight norms that we presented here—the Net Generation Norms. We have an
unparalleled opportunity to learn from them. Increasingly the people, compa­
nies, and nations that are succeeding today are those who are listening to the
new generation. We can listen to their views on the world. We can learn from
their effortless mastery and application of new tools, ways of working, and
methods of collaboration. I believe, by listening, we can envision and enact the
new institutional models required for the twenty-first century.

Read on.
A GENERATION BATHED IN BITS

In January 2004, Mark Zuckerberg had a real-life version of a common nightmare. He was facing his first round of exams at Harvard and he hadn't studied or read anything the professor had assigned for a first-year art history course called Rome of Augustus. Zuckerberg hadn't even gone to class during the term. He was too busy creating a cool computer program called Facebook that would help students get to know one another and share information. Now, a few days before the exam, Zuckerberg was, in his words, “just completely screwed.”

But he had an idea, straight out of twenty-first-century computer science. He created a Web site and put pictures from the course on it, with a little discussion beside each picture. Maybe the other students could help out by filling in the blanks. Within 24 hours, Zuckerberg’s classmates helped out alright, with notes so cogent that everyone, Zuckerberg included, passed the test with flying colors. And according to Zuckerberg, the professor didn’t see it as cheating. Instead, he was “really pleased” to see the students collaborate in such a creative fashion.

After acing his art history test, Zuckerberg returned to his school project, Facebook, which has since become one of the most ubiquitous social networking sites in the world; on it, friends and acquaintances keep up with each other’s news. Now, with more than 70 million active users and a market value
estimated at a couple of billion dollars or more, Facebook is a great example of how this generation uses and revolutionizes technology. As we’ll see in this chapter, this is a generation that likes to share information. They want to be connected with friends and family all the time, and they use technology—from mobile phones to social networks—to do it. So when the TV is on, they don’t sit and watch, as their parents did. TV is background Muzak for them, to which they listen while they check out information or talk to friends online or via text message. Their mobile phones aren’t just useful communication devices; they’re a vital connection to friends. And now that the “phones” are increasingly connected to the Internet, the Net Geners can stay connected with friends online wherever they go. In this chapter, we’ll look at this small-screen revolution in the United States, and, as an indication of where it might be headed, in Japan.

The Net Generation uses digital technology in a very different way than boomers do. The Net Geners have developed different reflexes and behaviors, which they use when they are on their mobile phones or are surfing the Internet. But the differences don’t stop there.

This generation is revolutionizing the very nature of the Internet itself. Zuckerberg’s Facebook is just one example of the popular social networking sites that are turning the Internet into a place to share and connect, a kind of cyber community center. Net Geners are transforming the Internet from a place where you mainly find information to a place where you share information, collaborate on projects of mutual interest, and create new ways to solve some of our most pressing problems.

One way that they are doing this is by creating content—in the form of their own blogs, or in combination with other people’s content. In this way, the Net Generation is democratizing the creation of content, and this new paradigm of communication will have a revolutionary impact on everything it touches—from music and movies, to political life, business, and education.

They might just be the generation to activate that slogan that we boomers chanted in our youth—Power to the People. It can happen now because the Web 2.0 makes it easier for ordinary people to organize themselves, instead of having to do so under the control of hierarchical, often authoritarian, organizations. Instead of being just small cogs in a large and impersonal machine, they now may be finding the power to become autonomous entities unto themselves.

But this sunny story may have a dark cloud hanging over it, one that few Net Geners have yet seen. They are sharing intimate details about themselves, lavishly illustrated by pictures that might come back to haunt them once they are seeking public office, or a high-ranking job in a public corporation. We’ll explore this issue toward the end of this chapter. This generation is giving up its privacy, not only because of the social networks, but because they are happily answering questions from the corporate world about their private lives. George Orwell, as it turns out, was only partly right when he wrote 1984. It’s not Big Brother who is watching you just yet; it is Little Brother—your friendly marketer. And this is only the beginning. We appear to be moving into a world in which you will be connected to everyone all the time wherever you go, from the little device in the palm of your hand. Will that finally signal the end of privacy?

**THEY USE TECHNOLOGY DIFFERENTLY THAN BOOMERS**

To this generation, the Internet is like the fridge. They don’t belabor the nuts and bolts of its operation; it’s just part of life. “Kids think money comes from a wall,” says Internet authority Jerry Michalski, referring to an ATM machine, “and music comes from computers.”

Consider how Matt Ceniceros, a 26-year-old and father of two, begins his day in Memphis with his BlackBerry. “I use it as my alarm clock, night-light, watch, and a phone,” he says. Like most Net Geners, he doesn’t bother with a home phone. “I wake up and check e-mail that comes in from overseas throughout the night and from the early starters in my work group and start planning out my day. It’s much easier to look at my BlackBerry than it is to fire up my laptop and fight with the Virtual Private Network. Plus as more sites are optimized for mobile phone users and the wireless networks get better, using my BlackBerry as a Web browser becomes easier and easier. On trips it becomes a makeshift GPS device.”

On the way to work, Matt doesn’t listen to top 40 songs or the news on the car radio. He plugs his iPod into the car and listens to his own selection. For morning news, he checks the NewsGator RSS aggregator, and then checks up on the blogs in Bloglines, the Google Blog search tool, and Technorati.

In the evening he doesn’t settle into the sitcom routine. Instead, he talks to friends on Skype (an Internet-based telephone service that lets you make long-distance calls for pennies an hour) and shares photos on Facebook, plays on his Nintendo Wii, and checks the latest on YouTube while his two-year-old son watches videos of sharks and airplanes. He barely mentions TV.

**TV—the New Background Muzak**

Net Geners have completely different media habits than their boomer parents did at their age. When my generation, the boomers, watched TV as teenagers, we just watched, about 22.4 hours a week; we didn’t talk back. When we read newspapers or listened to top 40 hits on the radio, we were mostly passive
consumers. It was the great, distant powers—that-be in the news and entertainment industry decided what news was fit to print, what songs were worth hearing, and what movies would be in the movie theaters—not us.

The Net Generation watches a lot less TV than boomers did at their age—only 17.4 hours a week. But of course they spend more time on the Internet—anywhere from 8 to 33 hours a week, depending on the survey. Older Americans, in contrast, watch more TV and spend less time on the Internet. Estimates of the Net Gen's online use vary as widely as the Net Gener themselves do. Serious game players might spend even more time online; people who do not have Internet access at home would probably spend less. (About 9 in 10 American Net Gener have Internet access and their own computer at home.)

But when Net Gener watch TV, they treat it like background Muzak as they hunt for information and chat with friends online or on the phone. Multitasking is natural for this generation. While they're online, 53 percent listen to MP3s, 40 percent talk on the phone, 39 percent watch TV, and 24 percent do their homework, according to a survey by Harris Interactive. When they're talking to their friends, they don't hog the family phone either—telephone use has dropped significantly for this demographic. Instead, kids text-message, or type out a comment on Facebook, Skype, GTalk, or AIM.

But if you ask them which medium they can do without—Internet or TV—TV is the loser in all 12 countries we surveyed. (See Figure 2.1.)

Everywhere you look, TV is suffering as the leaders of the first global generation turn their backs on it. The 2008 Grammy Awards tell the story. Most award shows have been suffering a viewer decline over the last few years, but the 2008 Grammies were hit especially hard—particularly by the teen demographic. The awards ceremony, which aired on CBS, had a 3.8 percent viewer rating among teens aged 12-17, down from 9.7 percent in 2004.

To be sure, teens are still interested in the Grammy performances, the award winners, and red-carpet fashions. They just don't want to sit through an entire broadcast to see the interesting bits. Instead, many headed to YouTube, where four- to six-minute highlights were available. Teens also headed to the various celebrity and fashion blogs covering the event. The same teen behavior was also seen with respect to the 2008 Academy Awards.

The Net Gener want to see it with their friends—not in the same room necessarily, but online. When they watch red-carpet fashion online, they want to critique the fashions with their friends, online. They often experience the communal aspect of watching large award shows without actually watching the entire show as older generations do. Instead, they join the real-time polling, live chats, and lively discussion boards on sites such as Popsugar.com and GoFugyourself.com, which posted images of celebrity outfits complete with discussion and analysis.

When they do watch TV, Net Gener prefer downloading the TV shows they follow into their computer, or prerecording them on TiVo, which lets them take their content wherever they go and watch it whenever they want. My Time replaces Prime Time.

The TV they do watch is very different from the TV their boomer parents watched as kids. There are now hundreds of channels. Because of the greater choice there is more nonvacuous content: TV is a distribution channel for good movies, documentaries, sports events, music, comedy, interviews, and news. As a teenager, Alex's favorite channel was the History Channel. Many television sets have multiple windows by means of which you can read sports scores while watching a game, or that enable you to watch a few games or shows simultaneously. When they do watch TV, they do so through these multiple lenses.
One day, when I was visiting my son Alex at Amherst College, in Massachusetts, I learned how he and his friends "watch" television. Five of them were sitting in a common room, each with a laptop. They were watching three television sets, all closed-captioned—one airing a sports show; another, the news; and another, a sitcom. They were all talking with each other and playing a game they had just dreamed up. Something would come up on one of the three TV sets that would be the source of debate and then they would each race to their laptops to see who could find the answer. One TV might say that the Mafia is the number one employer in Italy? No way! Or one of them would assert that something Jerry Seinfeld had just said was an obscure Shakespearean reference. No way! Of course, occasionally, one would use a cell phone or text a friend while all this was going on. Watching the boys, anyone older than 40 might marvel at how they could manage all these kinds of media at once. What might be even harder to grasp was that, rather than stressing them out, it was actually a lot of fun for them.

The writing is on the wall for broadcasters. We're witnessing a classic market disruption, a profound disturbance that acts like a devastating earthquake, with the potential to level every structure in sight. Back in 2007, I was asked to give the opening speech at a conference of national broadcasters. The conference was aptly titled "The Transformation of Broadcasting," and I told them that their theme was a good one, perhaps better than even they realized. In the years to come, broadcasting wouldn't be broad, I said, and it wouldn't be casting. They could no longer count on reaching a wide spectrum of the public. And it wouldn't be one-way communication either. The dominance of one-way, passive media consumption was over. This fact has profound implications for this generation, and for the major media players, as we'll see later in this book.

The New Content Creators

When they search for information or entertainment, they expect it to turn into a conversation. Nearly 80 percent of Net Generes under age 28 regularly visit blogs, the most popular way to create and share content. These collections of personal thoughts, opinions, and interests—or even artwork, photos, stories, or videos—represent unfiltered self-expression. Some 40 percent of teens and young adults have their own blogs, according to the Pew Research Center. They're contributing more content, too. Some 64 percent of the Net Generation engaged in some form of content creation in 2007, compared with 57 percent in 2006. That amounts to half of all teens aged 12-17, or about 12 million young people, in the United States alone, and this number looks likely to grow year after year.

Mashups—mixing other people's content—is also popular. One in four Internet-using teens remixes content online to create some form of artistic expression. Over the past few years, for example, fans of the artists represented by the label Wind-up Records have spent at least a quarter of a million hours producing and sharing more than 3,000 music videos, says Stanford professor Lawrence Lessig. But these are not your garden-variety music videos.

Fans—primarily kids—use their PCs to synchronize Japanese anime art with popular music tracks to create an entirely new art form called anime music videos. According to Lessig, the 3,000 anime music videos relating to Wind-up Records represent just 5 percent of the total Net-generated creations circulating on one popular site. AnimeMusicVideos.org is one such Web site, with over 900,000 registered users and close to a million posts (900,000). But, as Lessig indicated, this is only the tip of the iceberg. Half a million users frequent this site and close to 30,000 music and anime enthusiasts contribute to it.
The Small Screen Revolution: The Age of the Mobile Phone

However, this is not about use of PCs. There is a small screen revolution and this generation is taking it to the streets. For Net Gener, the mobile phone is becoming the tool of choice to access the Web. Most kids in the United States have them. By the middle of 2007, 72 percent of 13- to 17-year-olds in the United States had mobile phones. Teens, along with their 8- to 12-year-old younger siblings, are the fastest-growing segment of the mobile phone market, according to the Yankee Group. Their parents are buying them because they see mobile phones as a security device. A survey released in December 2007 showed that 78 percent of parents considering mobile phones as a holiday gift for their child were motivated by safety, and not entertainment. With a mobile phone, kids can call home in an emergency, while parents can call to remind them of a curfew—or even check their whereabouts.

Kids naturally see the phones differently, as an indispensable social tool—like having a friend in their pocket. Think of what the typical teenage girl does as she exits high school in the afternoon. She flips open her mobile phone—even if friends surround her. Teens are being serious when they tell their parents that without a mobile phone they’re a nobody, says Robbie Blinkoff, principal anthropologist at Context, a Baltimore research company that studies consumer trends.

“I don’t use my phone for voice because I have a cheaper data plan.”
—KATIE TINKHAM, 16, RIVER FOREST, ILLINOIS

For Net Gener, e-mail is so yesterday. It’s what you use when you write a polite thank-you letter to a friend’s parent. We asked respondents in an nGenera study to describe various means of communication, including face-to-face, e-mail, texting, social networking, telephone conversations, and instant messaging. I was amused to see that 48 percent of respondents considered e-mail professional, while another 31 percent considered it boring. It was also seen as a more formal method of communication. “I use e-mail for business type [sic] of things,” said one respondent. “I don’t say to my friends ‘e-mail me later.’”

Without their mobile phones, Net Gener get anxious in a hurry. Teens that are used to having unfettered access to a mobile phone begin to feel real anxiety and a sense of “deprivation” when separated from the gadget for longer than 24 hours, according to Context. In the UK, they even have a word for it—“no-mo-phobia.” Some teenagers do not turn off their phones, and sleep with their prized possession beside them on their pillow, in case someone texts them after midnight with dramatic news. Part of the research that we did was qualitative, allowing Net Gener to create a collage describing how they would feel under different circumstances. Opinions were gathered from the west coast of the United States to South Africa. Some of the most revealing collages were shown when Net Gener were asked to describe how they would feel if they were disconnected from their technology for an entire month. The collages shown below and on page 48 are representative of the submitted responses.
How would you feel without access to communications technology?

Source: The Net Generation: A Strategic Investigation, QnGenera, 2008

Phone or Digital Copilot?

Today’s phones are sleek digital Swiss Army Knives that do a lot more than make a phone call. Now, as mobile phones are being linked to the Internet, they’re turning into something completely different. Already the word mobile phone is a misnomer. Manufacturers are piling on features, turning these devices into small, powerful computers that are part voice communication, part BlackBerry, part iPod, part Web browser, part texting device, part digital camera, part video camera, part voice recorder, and part GPS compass. They will have a persistent connection to the Internet, so you will always be online.

We’ll have to call them something else—a buddy or even a digital copilot—because all of us, young and old, will rely on them heavily to get through our day. Apple’s hugely popular iPhone, with its 16 applications, hints at the versatility of tomorrow’s devices. Apple also released details of the iPhone’s operating system to encourage other companies to dream up new uses for the phone. Google is doing the same thing with its so-called Android initiative. The search-engine giant has partnered with dozens of phone makers, networks, and software companies to make it as easy as possible to develop new uses for tomorrow’s copilots.

To get an idea of what the future will look like in the United States and Canada, look at the way Net Geners use mobile phones outside North America. Mobile phone usage worldwide is skyrocketing, from 11 million mobile subscribers in 1990 to 2.2 billion in 2005, according to the UN Millennial Goals Report. In many countries, access to desktop or laptop computers with a broadband Internet connection is limited, and the mobile phone with high-speed connection to the Internet is the preferred method to go online. Connecting to the Internet with a mobile phone is cheaper than connecting by computer, which is why they’re growing so fast in Africa, where mobiles outnumber landlines in every country. More than 50 million Africans had a mobile subscription by the end of 2005, representing 5 percent of Africa’s population. In Asia, up to 90 percent of consumers in some Asian countries subscribe to wireless data plans, versus just over half in the United States.

Japanese youth, who are bellwethers for the future, love their mobile phones. In Japan, about one-third of primary school students aged 7–12 years old use mobile phones, and in high school this figure jumps to 96 percent, according to a government survey released in late 2007. Japanese youth use their phones extensively—an average of 124 minutes a day for high school girls and 92 minutes for boys—to listen to music, chat with friends, surf the Internet, and even read books.

Mobile phone novels in Japan are a huge hit. Of last year’s 10 bestselling novels, 5 began as mobile phone novels. Here’s how it works: Each day the author uploads snippets of text to mobile phone novel Web sites, and readers download the text to their phones. One author, a 21-year-old woman named Rin, wrote If You over a six-month stretch while attending high school. She attracted 20 million readers. Her story of tragic love between two childhood friends was turned into a 142-page hardcover that was the fifth-best-selling novel in Japan in 2007.
Mobile Phones Overtake PCs
No wonder Internet usage surpassed personal computer usage back in 2002. But, then again, I've always thought the term personal computer was an oxymoron, like jumbo shrimp, military music, or plastic glasses. The whole purpose of computing is not personal. It’s not a private activity—it is about connecting and collaborating and engaging with the world. Net Geners are proving me right. (See Figures 2.2, 2.3, and 2.4.)

DIGITAL TECHNOLOGY IS CHANGING THEIR BEHAVIOR:
A DAY IN THE LIFE
How is the digital technology influencing the Net Geners' behavior? We asked the members of the GrownUpDigital community on Facebook to describe a day in their life. Here’s one from Rahaf, the 24-year-old I interviewed in front of executives—which provides an extraordinary glimpse into the future. She left her job at a leading-edge market research company this year to become an independent new-media strategist. She travels a lot, mainly in North America and bills clients for about 50 hours a week. Business is great, she says. Just compare her digital day with the kind of technology that a boomer uses in, say, corporate America. She works out of her apartment in Toronto.

10:00 a.m. Wake up, shower, change, have breakfast. I'm so glad I make my own hours, because 10:00 a.m. is the earliest I think anyone should be up. I much prefer the night!!

10:30 a.m. Log on to my MacBook. Sandy (<http://www.iwantsandy.com> www.iwantsandy.com) is my online virtual assistant who manages my day to day tasks/appointments. She sends me an overview of what I have planned each day as well as reminders. I use Google blog reader to check out what's happening on the blogosphere (I read over 55 blogs in a week) and Google News to get customized news relevant to my interests, and related to some of the projects I'm working on. I'm subscribed to customized RSS feeds to get news that's especially relevant to me.
11:00 a.m. Start working on client projects. Log on to private client Wiki that I set up to see what has been added night before. (Client in different time zone.) Make some changes and input. Add new milestones to time lines. Use Google notebook to grab various pages for different research projects. MSN with friends. Check out some funny YouTube videos.

12:00 Skype Sister, she’s in London. We hang out via videoconference while we’re both working. I watch her make amazing roast chicken sandwich for lunch. My own cooking network online.

1:30 p.m. Use SkypeOut to dial grandparents in Syria. So cheap. Amazing. They are doing well. Talk with my uncle via video chat in Dubai. Promise to upload more pictures on our family site.

2:00 p.m. Head to the gym. Load up iPod with latest podcasts, and usually one or two episodes of the Colbert Report/Daily Show to entertain me on the treadmill.

3:00 p.m. On my way home, I get a text from my older sister, reminding me it’s mom’s birthday dinner on Saturday. I write Sandy an email from my BB and she adds it automatically to my Google calendar which wirelessly syncs with my BlackBerry calendar. Ping boyfriend via BlackBerry voice note, and tell him not to forget to pick up a movie. Ask Sandy to send him a list of tagged videos we previously thought we’d want to see.

3:30 p.m. Client meeting. Head on over, use BlackBerry GPS to navigate to an unfamiliar part of the city. Chat with friends on BB messenger & Google chat while taking a cab.

5:00 p.m. Back at my desk. I see my friends have scheduled us for a movie night via our shared events calendar on Google. I check out a preview online and check RottenTomatoes.com for a review. Looks good. Listen to iTunes, while working or to SeeqPod.com (Live streaming music search engine). My dad Skypes me (He’s north of the city). We video chat and make plans for me to come on the weekend. He subscribes to one of my calendar feeds, so he knows when I’m free.

6:00 p.m. Dinner. Use <http://www.cookthink.com> to find a recipe that matches the ingredients in my fridge AND my mood. Yummy, stuffed peppers. I use iMovie and take a mini clip to send to sis. Stuffed peppers trump roasted chickensandwich!

7:00 p.m. Online errands. Pay bills, buy mom’s birthday gift off of amazon, check Facebook. Get photo text messages from sister. Should she buy the blue shirt or the red shirt. Look at both pictures. Recommend red shirt. It’s a nicer color and fits her better.

8:00 p.m.-10:00 p.m. Hanging out. Check out Oprah that I’d PVR’d earlier that day. I love fast forwarding through commercials. Watch some TV on my computer via Joost.com. Discuss latest Lost Episode on forum. Glad to see I’m not the only one going crazy with all the mystery this season. Discuss some good theories with the hard core viewers.

10:00 p.m.-1:30 a.m. Finish up client work.

2:00 a.m. Play some X-box live with some friends in the city. I suck so bad at Halo three they always sneak up behind me and take me out.

2:30 a.m. Update my Shelfari.com site with the latest book I just finished. I rated it, and discussed it with some other people online who have read it. Compare what my friends are planning to read, and order some of their favorite picks off of Amazon.

2:45 a.m. Check my “Daily Digest” sent by Sandy with tomorrow’s meetings and to do’s. Prioritize important tasks and get ready for bed.

When I interviewed Rahaf in front of the business executives, I asked why she left her job to become an entrepreneur. She paused for a moment to reflect. The first thing she said was “I’m not a morning person.”

THEY ARE CHANGING THE TECHNOLOGY: IT’S NOT YOUR DADDY’S INTERNET

Technology is influencing the way kids think and behave, but it’s a two-way street—the way kids think and behave is influencing and shaping the Internet itself. In the twenty-first century, knowledge is flowing more freely than ever, thanks to the Internet, but the Internet’s true potential was not realized until the young people started using computers. Now they’re helping to transform it into something new—Web 2.0, the living Web, the Hypernet, the active web, the read-write Web. Call it what you like—this ain’t your daddy’s Internet. It’s become a global, active, networked computer that allows everyone not only to contribute but to change the very nature of the beast.

Wikipedia, the global encyclopedia written and edited by tens of thousands of contributors worldwide, is a classic example of this new Web of collaboration. The Net Gen is driving the transformation in lots of ways. They’re putting 100 million blogs online, all searchable by Technorati—a company that monitors blog usage. They’re having fun with online, multiplayer games, which are projected to top $44 billion in revenue by 2011—making collaboration entertainment bigger than Hollywood. They’re sharing movies and songs online with tens of millions of people through peer-to-peer file sharing tools, such as Kazaa, BitTorrent, and LimeWire.

It is getting easier all the time to join the global conversation. A couple of years ago, sending a video clip to YouTube was a complicated process. You had
to record, upload, and convert. But now it has been simplified to a few clicks. Casio recently announced two low-cost point-and-shoot digital cameras that could also be set to record short videos in a YouTube-type format. No computer manipulation required; just shoot your video and upload it for the world to see. The Casio camera is important for this generation because it makes it easy for them to collaborate and create online. For the Net Gen, and the rest of us who can adapt, this is a chance to see ourselves, in living color, as part of the global conversation.

The graph in Figure 2.5 shows the percentage of our global Net Generation sample who say that they “regularly add or change things online,” such as posting a comment on a blog, correcting a Wikipedia listing, writing a movie review, or uploading a YouTube video.

Social Networks: The Net Gen Version of a Global Community Center

Just as the Web was beginning to change into a platform to contribute and collaborate, Mark Zuckerberg entered Harvard University. A few weeks after passing his exam on Augustus in Rome, Zuckerberg launched Facebook from his college dorm. He moved to California that summer, intending to return to Harvard to complete his degree in computer science. Instead, he dropped out to become full-time CEO of Facebook, the archetypal social network for friends. It wasn’t a public space like MySpace, where you can connect with 1,000 of your “best friends.” Nor was it a chat room, where you were supposed to be interested in conversing with an anonymous person called Mooselips or Cyberchick.

This was a place where you could be yourself, a real person, and feel free to talk with your close friends or your wider circle of friends. You could show them pictures, tell jokes, make plans, and do many of the things that friends do together. Facebook allowed you to create an online community for friends. You could also shut out people you didn’t know, or didn’t want to have in your circle of friends. It’s a community independent of time and space. You can contribute whenever you can, from wherever you are.

In a conversation I had with Zuckerberg in spring 2008, he explained the sudden popularity of Facebook this way: “In order for us to be successful in this century, we’re going to need to be more connected and we’re going to need to have a better sense of understanding of where other people are coming from and just greater sense of like, we’re all connected.”

Or, as Erin Lewis put it: “My high school reunion happens on Facebook. All day. Every day.”

A Place to Hang Out: New Private Spaces Online

For today’s teens, spending time on MySpace or Facebook is about reclaiming private space, says danah boyd, a University of Berkeley-based social scientist. “Adults control the home, the school, and most activity spaces,” she said in a recent talk to the American Association for the Advancement of Science. “Teens are told where to be, what to do, and how to do it. They lack control at home, and many teens don’t see home as their private space.”

They’re finding new private spaces online, where young people gather en masse, network with peers and make shared spaces of their own. Online spaces are becoming more appealing as the physical world becomes less welcoming. “Classic 1950s hang-out locations like the roller rink and burger joint are disappearing, while malls and 7-Elevens are banning teens, unless accompanied by their parents. . . . Hanging out around the neighborhood or in the woods has been deemed unsafe for fear of predators, drug dealers, and abductors,” says boyd.

The personal profiles on social networks are what she calls “public displays of identity.” In virtual spaces, teens are increasingly free to shape their own identities and manage their networks. Comments from friends provide a channel for feedback and affection. Though many of these relationships are shallow, boyd argues, the process plays an important role in how teens learn the rules of social life and cope with issues such as status, respect, gossip, and trust.
What They Mean: A Potent Organizing Tool for Communities

We’re still in the early days of understanding how social networks will be used and for what purposes. The picture is not clear yet, which is not surprising. “People tend to frame the new in terms of the old,” notes Alan Majer, executive analyst at nGenera. “When automobiles arrived, for instance,” he says, “they were seen as ‘horseless carriages.’ It wasn’t immediately obvious that drivers could share the interior with their passengers. And when ‘moving pictures’ were invented, it also took a while for studios to tap all the new possibilities the medium offered. Similarly, next-generation social networking platforms will unlock entirely new possibilities but it will not be immediately obvious what all of them are, or how they should be tapped.”

Clearly, social networks are a phenomenal way to spread information. When you put a photo on your personal profile page, you don’t have to e-mail friends or call them to tell them about it. The news about your photo is instantly transmitted to the “news feed” on their Facebook profile pages. You don’t have to do anything; communication is instant and automatic. Friends can spread news to outsiders too, and the news can spread like wildfire. If you have 20 friends and they find something interesting, they might tell other people. If each of your friends sends the news to two other people, and they do the same, you can understand why some bits of information “go viral,” as they say these days. But that’s only the beginning of the deep impact that social networks will have on our lives.

People Can Self-Organize on the Internet Rather than Following the Leader

For several years, I have been studying social networks and how they affect this generation and the world. But I continue to learn from observing how young people use them in spontaneous and creative ways. On Christmas Day 2006, I got a wake-up call, Net Gen style. I had given my son Alex, then 20 and a college junior, as one of my Christmas presents under the tree, an advance copy of my new book Wikinomics. He thanked me and a couple of hours later let me know, “Hey Dad, this is a good book. I think I’ll create a community on Facebook.” I watched and 15 minutes later he had created the “Wikinomists of the World Unite” (WWU) community on Facebook. Fifteen minutes later he had six members. By the time we were eating turkey on the same evening, he had 130 members in seven countries; seven regional coordinators; a president (Alex), a secretary, and a chief information officer (to deal with the technical challenges facing the community). He sent out a PDF of the first two chapters of the book, and before Christmas Day had ended, interesting things were happening. “I found an error in Mr. Tapscott’s book,” said one response. “Exactly how will Mr. Tapscott be contributing to our community?” said another—appearing to be placing demands on me!

The WWU community has drifted off to do other things; no one has posted anything for months. Yet it reminded me of how the Internet, in particular social networking, can give power to a new force. People have organized themselves—without guidance from authorities—throughout human history. Language was a product of self-organization. There was no central committee of the English language that said a book will be called a “book.” The word book just happened. Science was initially a product of self-organization as was the early period of the arts, education, and government. But what used to take centuries or years can now happen in months or on a single Christmas Day. When I was 20, I could have never created a community with 130 people in seven countries, no matter what I did.

And because social networks are being driven by youth, young people are driving the resurgence of new collaborative models that are now shaking the windows and rattling the walls of every institution.

They started with things that young people do—playing games online, listening to music, watching TV, and going to the movies. Now, as the first Net Generers enter their thirties, they’re making an impact on civic life, and in politics. And in the next few years, I believe, social networking will become the basis for doing business in other spheres of adult life.

THE PLAY’S THE THING: GAMES, MOVIES, AND CIVICS

Gaming Together

There is also something big happening in the world of video games—they are moving online. Through their multipler collaboration, young people are changing gaming and even the nature of entertainment. Forget about the loner game player who is playing only with the quick reflexes of his or her fingers. In this new world, you have to cooperate and learn from experience. The online game World of Warcraft, for example, now has an astonishing 10 million subscribers around the world. Within the game, people create an Avatar they use to explore the vast virtual world, completing quests, improving their skills, and battling monsters. As they succeed, players earn virtual money and other items, improve their experience, and add to their reputation. As they go through the game, their Avatar increases in strength and power. Many players choose to join guilds, a group of players who form a group and regularly play together.
Game players can even get exercise. Have you heard of the “massively multiplayer online dance games”? The new genre represents an evolution in the gaming community; it has proven to be very popular in India and is quickly gaining traction around the world. One popular game is called Dance Mela,” created by Kreeda, an Indian-based game company. Dance Mela is one of the very first multi-player games produced in India. Users create Avatars to explore the Kreeda world and dance along to popular Bollywood hits. Players can “dance” in one of two ways. They can dance just with their fingers, using their keyboard to press the appropriate keys or they can dance with their feet. They purchase a dance mat, attach it to their computer, and step on the corresponding patterns on the mat. Those with two left feet can even join the in-world virtual dance class taught by Saroj Khan, one of India’s leading choreographers, to learn the basics.

They don’t have to dance alone either. Dancers can create private dance rooms and invite their friends, or frequent one of the world’s many public dance halls and meet new friends. The game is aimed at the Net Generation, with an emphasis on staying fit: if you don’t dance for a few days, your Avatar is likely to put on a few pounds!

Music and Movies: The Online Audience Chooses the New Stars
While online dancing is fun, social networking sites are far more influential and they’re used for much more than merely staying current with your friends’ travels or love lives. Their true value lies in the ability of sites like MySpace and Facebook to unite people around their various interests, from politics to music. Social networks are now becoming the conduits through which new trends in music, fashion, technology, and other aspects of youth culture are flowing.

Take OurStage.com, a venture started in 2006 by a group of Emory University students in Atlanta, Georgia, in an effort to promote the next generation of musicians and filmmakers. “The Internet was supposed to help artists go around record labels and studios to reach their fans,” says Alyssa Hale, an OurStage representative. “It didn’t work out that way,” adds Quinn Strassel, another employee, “because tens of millions of people showed up at the Internet party at the same time, with no way to sort the quality from the noise— until now.”

To deal with this overflow, they created OurStage.com. Filmmakers and musicians can upload a five-minute movie they’ve produced or a song they’ve written onto the OurStage Web site. Artists have a variety of both music and film genres they can compete in. Users compare two entries side by side, selecting the entry they think is better (and by how much) and a complex algorithm accumulates data and eventually selects the top contenders, who then compete in quarter, semi, and final rounds.

Viewers use their mobile phones to choose the winner once the finalists have been selected. Prizes include cash, gadgets (iPods), and the opportunity to perform at a live event. Contestants can promote their work by downloading unique banners or badges that they can then embed into their blogs, sites, or e-mails directing people to watch and vote for their work. Songwriters also have the option of uploading their songs to the site, where users can download them for $0.99 a song, with all profit going to the artist. OurStage does not take a cut, nor do they charge any processing fees.

But it was getting onto the Facebook grid that really caused OurStage to explode. They started out with about 140,000 unique users, a community that they built by responding to the needs of their users over the course of three months. After they started reaching out to Facebook and MySpace, their exposure went viral, and in just one month they experienced the same amount of traffic on their site that they had in the past three. Just one year after its launch, OurStage has grown to a community of over 1.5 million unique users, making it the largest music site on the Web!25

These online communities, like Facebook, are global, and they offer a virtual microphone or movie screen to unknown musicians and moviemakers with talent, yearning for their 15 minutes of fame. You don’t need to be a large corporation or someone famous to be heard. You do, however, need to be innovative to get noticed. This is exactly what Without Tomorrow, a California band, did to promote its music.26

There’s a surplus of unsigned indie bands with a MySpace presence, so it takes creativity and a good strategy to catch the eyes and ears of fans and record labels. Without Tomorrow came up with an innovative use of the social networking site: a free concert at their local boardwalk in Sacramento, broadcast live on the Internet. The reason for the live show? Celebrating a million song plays on their MySpace page. To overcome the high cost of the bandwidth necessary to support the Internet traffic, Jeremy Unruh, the band’s drummer and cofounder, turned to the Network Foundation Technologies proprietary software. This software uses peer-to-peer file sharing, while live streaming can reduce the bandwidth by up to 50 percent. The more people with access to the video stream, the more people share the load. This allowed the band to use their
large fan base to their advantage. Fans from all over the world were able to tune in to the live concert, and the band got its name out there. And, as the band grows in popularity, their concert and other revenues grow as well. 27

**Film 2.0: The Audience Helps Create Them**

The Net Generation are starting to shake up the world of movies. For the last two years, the Berlin Film Festival has invited filmmakers to something they call the Berlinale Keynotes. At the 2008 festival, in my opening speech, I argued that just as MP3 and the Internet have turned the music industry upside down, even more dramatic changes are in store for movies. After I spoke, several young movie and video game entrepreneurs presented their projects. I have to say, I was blown away, and the audience was as well.

The film industry is being transformed by the combination of the Net Generation, the Web 2.0, and the game industry. The current paradigm of film viewing—two hours in a dark theater with popcorn—won’t disappear, but it will become just a small piece of the bigger market I call Film 2.0. Movies, video games, digital effects, and networking will all mesh to change where and how we watch films, and how films are created, distributed, and funded.

By looking at Net Generations interaction with video content, we can see that tomorrows films will be more varied in length. Short films will be increasingly popular, watched not only on laptops but by young people on tiny screens. The three-minute movie already dominates YouTube. There will be frequent viewer participation in the plot. Todays video games show the direction in which we’re headed.

Jade Raymond, a brilliant, stylish video game industry rock star, spoke after me. Jade started developing software at the age of 14; as a 29-year-old she became project director for Assassins Creed, a game released in November 2007 on the PlayStation 3 and Xbox 360 video game consoles. The game features highly detailed and interactive environments from the time of the Third Crusade—the game’s developers were diligent to ensure that these environments are historically accurate. The game, as it is played, acts as a sort of subliminal history lesson. The game sold 2.7 million copies in its first four weeks of distribution. When Jade demonstrated the game, the person sitting next to me whispered, “These games are really starting to look like a movie.” Hollywood, look out!

Also, as this century unfolds, look for movie equivalents of such open-source Internet projects as Linux and Wikipedia. Next up at the Berlinale was Ton Roosendaal, who presented Elephants Dream, the culmination of the

Orange Open Movie Project, produced by the Blender Foundation and the Netherlands Media Art Institute. It is the worlds first open movie, made entirely with open-source graphics software, such as Blender, and with all production files freely available for use by whomever it pleases. One of the worlds first full-length open-source movies, The Boy Who Never Slept, tells the story of an insomniac writer meeting a teenage girl online. Their friendship develops into an unlikely love story wrapped in a harsh reality. The total cost of making the film: $200; number of online viewers so far: 4 million.

Matt Hanson discussed A Swarm of Angels, which aims to create a $2 million feature film and give it away. The concept calls on a global community of “angels,” who each pay £25 in exchange for creative input on all aspects of the project. From the site: “A Swarm of Angels is a third way between the top-down approach of traditional filmmaking and the bottom-up nature of user-generated content. A way for anyone to influence the creation of a professional £1 million+ feature film.”

The Tracey Fragments is a new film starring teenage Canadian actress Ellen Page. All of the footage shot for the film is available for wannabe filmmakers to download and edit into music videos or trailers, or to recut the entire movie. A challenge was issued for the best use of footage with judging currently underway. The winning video will be included with the bonus features of the DVD.

How will viewers know what films are worth watching? For sure, many of these filmmakers won’t be taking out large newspaper ads. Understanding their young audience, they will rely on Web sites such as Rotten Tomatoes.com. This site is a wake-up call to the traditional “plan and push” model of marketing a film. Rotten Tomatoes uses the wisdom of crowds to rate movies and has become a leading source for online movie reviews. Anyone can be a critic. The site lets users, in addition to professional movie critics, contribute reviews. Users can also select which critics they want to hear from, and which ones they don’t. For both my kids, Rotten Tomatoes is the film bible.

**Self-Organization Hits the Streets**

College students, when they are not studying or listening to music, often engage in civic causes, as I did in my student days. They’re now starting to realize that social networking gives them extraordinary power to work outside the boundaries of political establishments in order to affect serious change. We will explore this topic in the final chapter of this book, but here it’s worth leaving you with a story. When the Revolutionary Armed Forces of Colombia, the nations largest rebel group, killed 11 lawmakers after taking them hostage in
2007, Colombians all over the world were outraged. Colombia has the unfortunate designation of being the kidnapping capital of the world, and it is estimated that some 3,000 people are currently being held captive there for one reason or another. FARC, the group named above, is responsible for many of the violent crimes in the country.

Oscar Morales, a young engineer from Colombia, wanted to protest, and so he went to Facebook. Enraged by the latest violence, he started a group titled A Million Voices against the FARC, which grew to over 260,000 members within the first few weeks.

Morales used the combined efforts of group members to organize mass protests both in Colombia and around the world. “We expected the idea to resound with a lot of people, but not so much and not so quickly,” says Morales. On February 4, 2008, there were simultaneous protests in 27 cities in Colombia and 104 major cities around the world as millions of Colombians took to the streets chanting, “No more deaths! No more kidnappings! No more FARC!” There were protests across Europe, Asia, and the United States. In Colombia, an estimated 4.8 million people took part in more than 360 marches in the country.

While many people are skeptical about the power of Facebook users to do something serious, I think this protest is significant. It demonstrates how social networking sites can be used to bypass mainstream organizations. Previous protests in Colombia were always organized by various political parties, which means that a certain level of control was usually exercised over the protesters. The FARC protests allowed the Net Generation to unite under the banner of a relevant issue and not be swayed by politics. They were able to remotely coordinate the logistics of hundreds of protests and communicate across time zones, languages, and borders. They used Facebook to become empowered to take action. In the hands of the Net Gen, social networks can be a potent force for change, as we’ll explore in the final chapter of this book.

HELLO OFFICER. PLEASE SMILE FOR THE CAMERA

The Net Generation is driving the democratization of content creation as young people generate online photos, music, and copy, from movie reviews to commentaries on everything from products to politicians. This is leading to a power shift from authorities to ordinary individuals—a topic that will be discussed throughout the book. People can participate in the economy in ways that were previously unthinkable—creating television news clips that rival those seen currently on TV, writing an encyclopedia like Wikipedia, or selling goods in e-markets like Craigslist. As knowledge expands, power is becoming more widely distributed as well.

Consider the ability of young people today to scrutinize the authorities. In the summer of 2007, three 14-year-old boys were skateboarding in Baltimore’s Inner Harbor, an activity that is prohibited by law. Police officer Salvatore Rivieri spotted the boys and told them to vacate the premises, which they did. But that’s not the end of the story. Officer Rivieri was physically and verbally aggressive to one of the boys, putting him in a headlock and pushing him to the ground. Rivieri yelled at the teen, “You hear me? I’m not your father. You give that attitude to your father. You give it to me, I’ll smack you upside the head. . . . Shut your mouth, I’m talking.” Unfortunately for Rivieri, one of the boys was secretly taping the entire incident using his cell phone’s video camera. The video was uploaded to YouTube.com in February 2008. It has been viewed more than 1.9 million times, and the story of Officer Rivieri—now dubbed “Baltimore Cop”—has garnered international media attention. It would be easy to blame the kids, as some have done, for showing lack of respect for the policeman, but the fact of the matter remains that they were illegally assaulted.

The Baltimore Police Department announced it would investigate the incident, and that Rivieri was suspended with pay. The video has sparked many comments on the behavior of the police and on the role of YouTube in the incident. One user put it this way: “Yeah, it’s disappointing he is still getting paid, but keep in mind his reputation as an asshole is now world famous. He has embarrassed his name, his family, and the Baltimore PD. That amount of shame isn’t worth his paycheck. Also, if he doesn’t get fired he has probably at least ruined any shot of being promoted. Thanks to YouTube, JUSTICE IS SERVED.”

To add to Rivieri’s discomfort, a second video has been uploaded to YouTube.com showing him hassling another teen, this time an art student. The student was videotaping people’s reaction to a shoebox he was moving with a remote controlled car. Rivieri is seen yelling at the teen to leave the public space and kicking both the box and the car. For many who didn’t like Rivieri’s behavior, the second video was icing on the cake.

A NEW SOCIAL UTILITY

By the time I flew to Davos last January, Facebook’s membership had ballooned to 70 million or so active users. It had become a meeting place not just for college kids but for people of all ages. Although it was still number two in the social networking world, after Rupert Murdoch’s MySpace, it was the network of
choice for the Net Generation. Zuckerberg was famous and in demand, so I was a bit surprised when a Facebook assistant e-mailed me to say Zuckerberg and his 30-year-old (now former) strategy chief, Matt Cohler, wanted to meet me.

At the appointed hour, Zuckerberg and Cohler turned up in the busy lobby at the Davos convention center, which was teeming with famous names in business. They were polite and eager, even deferential, as if they were talking to a friend’s parent. To my surprise, they even asked me to sign a copy of Wikinomics, the book I coauthored. I couldn’t help but marvel at the moment. I had simply written a book that had sold a few hundred thousand copies, not a huge feat. They, however, had created a social network of tens of millions of humans that was changing the world. I asked them what Facebook would be in the future. Facebook, they explained, wasn’t just going to be a social network for friends. It would be a social utility, like a power grid. It might seem like a grandiose claim for a site that has a “fun wall,” a venue where their idea of fun is to poke someone, or throw a digital snowball.

But Facebook is, in fact, a prime example of the mass collaboration we were describing in Wikinomics. In the book, we wrote that “winning companies today have open and porous boundaries and compete by reaching outside their walls to harness external knowledge, resources and capabilities.” Facebook is doing just that. As of the spring of 2007, they have allowed outsiders to create new services called “applications” that Facebook members can use. These applications can be anything from the popular photo sharing device that allows you to tag, or write a note about something in the photo and share it with your friends, to a gadget that lets you dedicate a favorite song to a significant other, or a device that facilitates an informal survey of your friends’ political views so you can see where you fit in. If users like these applications, they can put them on their personal profile pages. The makers of these applications hand them out for free, but can make money by selling sponsorships, posting ads, or selling other things.

The Hidden Side of Social Networks: Are You Sharing Too Much of Yourself? This new wave of applications for Facebook is growing fast, with 140 new ones added every day. But most Net Generos do not realize that these applications give the marketing world a new way to peep into the Net Generos’ private life. Once you install one of these applications, it can see everything you see. According to Facebook’s “Platform Application Terms of Use,” application developers can potentially find out “your name, your profile picture, your gender, your birthday, your hometown location (city/state/country), your current location (city/state/country).”

In addition, application makers can see “your political view, your activities, your interests, your musical preferences, television shows in which you are interested, movies in which you are interested, books in which you are interested, your favorite quotes.”

They can learn personal details about you—“the text of your ‘About Me’ section, your relationship status, your dating interests, your relationship interests, your summer plans, your Facebook user network affiliations.”

They can delve into “your education history, your work history, your course information.” And of course they can see “copies of photos in your Facebook Site photo albums” as well as “metadata associated with your Facebook Site photo albums (e.g., time of upload, album name, comments on your photos, etc.), the total number of messages sent and/or received by you, the total number of unread messages in your Facebook inbox, the total number of “pokes” you have sent and/or received, the total number of wall posts on your Wall,” a list of user IDs mapped to your Facebook friends, your social timeline, and events associated with your Facebook profile.

In other words, they can learn a lot about you. Facebook, of course, was not the first to give marketers a window onto the Net Gen world. As Kathryn Montgomery tells us in her new book, Generation Digital, marketers have been using digital technology to probe the minds and behaviors of Net Generos for years: “Digital technologies make it possible to track every move, online and off, compiling elaborate personal profiles that combine behavioral, psychological, and social information on individuals.”

But Facebook has become the lightning rod for what I think will become a huge issue: privacy. It is a major issue both for Facebook and other social networking sites, and for individual Net Generos. With all this sharing going on, I’m concerned that Net Generos are setting themselves up for the destruction of a basic right to be left alone.

THE DARK SIDE OF SOCIAL NETWORKING: IS PRIVACY OVER?
The Typical Net Gen Still Doesn’t Get It
The Net Generation is opening up to a degree that astounds their parents. Many Facebook enthusiasts post any scrap of information they have about themselves and others online, for all their friends to see—from digital displays of affection to revealing pictures. Most are not motivated by malice; they simply
want to share what they consider happy or fun events with others. Net Gener clearly don’t understand why privacy is important. A 2007 Carnegie Mellon study showed that 40 percent of those who expressed the highest possible concern about protecting their class schedule still posted it on Facebook, and 47 percent of those concerned about political views still provided them. 29

But They May Be Sorry
They should wake up, now. Lives have been shattered thanks to unsuspecting people flinging open their kimonos in the seeming intimacy of their Web sites.

The Internet has a long memory. In Texas, for example, a driver involved in a fatal accident found his MySpace postings (“I’m not an alcoholic, I’m a drunakaholic”) part of the prosecution’s case. Stories are legion of social network site users losing their jobs or being turned down for new jobs because of what they have posted online. A Florida sheriff’s deputy found himself unemployed when his bosses read his MySpace pages, which discussed his heavy drinking and fascination with female breasts. A Las Vegas Catholic school teacher was fired after he declared himself gay online. Colleges and schools are monitoring MySpace and Facebook pages for what they deem to be “inappropriate” content, and some kids are being severely disciplined or even expelled as a result.

A survey in the UK showed that 62 percent of British employers now check the social networking postings of applicants, and that a quarter have rejected candidates as a result. Reasons given by employers include concerns about alcohol abuse, ethics, and a disrespectful attitude.30 My son Alex thinks employers should relax: “If there is a photo of me drinking a beer at a party what does that say about me—that I’m a bad potential hire who abuses alcohol, or alternatively that I’m a social person who likes to enjoy life, with friends and a good network?”

OK, a picture of someone drinking a beer at a party may not be a problem, but what if it’s a more revealing picture—the kind that many Net Gener post on their sites these days? I think that, on this point, Alex and the Net Gener are wrong. The Net Generation may have lapped the boomers in the use of technology, but this is one area where the Net Generation has not lapped people my age. By now, we know that the late-night activities of our youth might not look so good in the sober light of our forties. But most Net Geners, as young people, aren’t thinking that far ahead.

In my discussions with teens and young adults, it’s clear that awareness is growing among Net Geners that inappropriate postings can do irreparable damage to a person’s job prospects or career. I’ve been told that it is now quite common to have a “no-picture-tagging” policy when out with friends. This means that if a friend uploads a picture with you in it, they won’t label that person as you, keeping you safe from Facebook’s search engines and news feeds. In fact, many young people I’ve spoken with have told me there are parties where guests are asked to check their cameras at the door.

They may be starting to get it, but I still don’t think they realize to what extent they are compromising their privacy on these social networking sites.

I Know What You’re Buying
Back in 2007, Facebook users could show one face to their “friends”—and let them see those fun party pictures—and another face to everyone else in the world, who would presumably be shown pictures more suitable for public viewing. Many Net Geners didn’t even bother using these privacy features. Only 20 percent of Facebook used any form of privacy on Facebook. The rest are letting the whole world see their private life on Facebook.

Then Facebook whipped up a storm of controversy when it introduced features that would make users share more with their “friends” than they might want. In November 2007, Facebook announced that whenever you buy something at a participating retailer, your friends will be informed. For retailers this would give a personal endorsement to a product, which was supposed to be better than a conventional ad for this demographic. This type of social marketing could potentially give Facebook tremendous commercial power. But Facebook users revolted. What if the book they bought was a Christmas surprise, or about a sensitive topic like how to manage your bipolar child? Zuckerberg apologized, and changed the system so that users had to opt in to the system, as opposed to opt out of it. As Facebook found out, such marketing programs need to be implemented with extreme sensitivity to protect the privacy of everyone involved.

New Privacy Controls: Different Categories of Friends
By early in 2008, Zuckerberg clearly realized that privacy was a core issue, and that Facebook’s privacy controls (friends versus outsiders) were inadequate. In March 2008, Facebook took steps to let users discriminate among different kinds of friends. So friends A, D, and E could see those bikini pictures, while friends X, Y, and Z could only see your work history. “We’re giving people tools so that they can share information with exactly who they want,” Zuckerberg told me just after introducing the new privacy measures. The new privacy measures, he added, did not reduce the amount of information that people
share on Facebook. On the contrary, they encourage people to share more. Twenty percent of Facebook users, for instance, are sharing their cell phone number with their friends, secure in the knowledge that the 70-million-strong Facebook universe won’t see it.

But That Doesn’t Solve the Problem

I’m still worried, though, and I’m not alone. According to Adrienne Felt, the coauthor of a 2007 study on social networking privacy, the new measures do not fix a key problem. You can decide which of your friends can see what on your profile, and you can stop the applications that your friends install from peering into your Facebook world. But, if you install an application—say, a photo editing application that lets you put Angelina Jolie’s hairdo on your best friend’s high school graduation picture—the maker of that application can see anything you put on your profile, like your dating interests, your summer plans, your political views, your photos, the works. The only way to stop the application developers from peeping into your own Facebook world, Felt says, is to not put any applications on your personal profile. The vast majority of applications don’t need your private data to do their thing, she notes, and yet all of them have access to whatever you can see.

Information about Me Is Mine

Facebook and other social networks must address this privacy question if they want social networks to be the operating system for the Internet. The core principle is this: information about me should be mine to give away or sell. Companies like Facebook that want to share information they gather about me should give me explicit notice, and obtain my explicit consent. They should only collect what they actually need, and keep it only as long as required. I should know what they know about me. This is not a new issue, of course. People have been handing over details of their consumer lives when they sign up for loyalty programs. But now in the digital world it’s a bigger issue, because people are disclosing far more information to far more people. And because Net Generations are the most active social network users, they are on the cutting edge of this issue. It’s not just companies that bear the responsibility of protecting their customers’ privacy. Each individual in the Net Generation has a responsibility to make sure he or she controls the information that goes out to the public. (This caveat applies to me too. Even though I have written a book on privacy in the digital age, I didn’t shield my own Facebook profile from the scrutiny of business contacts until a few months ago.)

Matt Cohler, Facebook’s former strategy chief, says the solution may spring from a redefining of what privacy is in a digital age: “In the past, privacy basically meant something was either visible to everybody or hidden from everybody,” he told me. “Private meant it’s a secret, or it’s something that I don’t share with other people. And I think what privacy is coming to mean today—for this generation that’s kind of always plugged into this grid, and as more and more people in older generations also get plugged into the grid, I think the definition changed for them too—is less about kind of totally public versus totally hidden, and more about giving people the ability to control what information they’re sharing with whom.”

Cohler’s solution to the privacy dilemma is to give each person control over what information he or she shares, and with whom: “My definition of the ultimate privacy setting would be if every person on Facebook had specified completely what information they wanted to share with what people, and what information they want to receive from what people. And if every user did that we would have sort of a perfect equilibrium of information sharing, and that would be sort of nirvana and utopia from our perspective. When I think of the ultimate privacy settings, I don’t think everything is hidden from everybody, for everybody. I think everything is perfectly configured by each individual person for everybody else.” Wise words. Such capabilities would go a long way to help, but people still need to use the privacy controls. That raises the question: what is the responsibility of social networks and other companies to help educate their users and customers on this issue?

A Broad-Based Invasion of Privacy

Facebook and the social networks are, of course, only part of the challenge. As the Net becomes the basis for commerce, work, the media, entertainment, healthcare, learning, and most forms of human discourse, our private lives are becoming a lot less private. When we buy books or music online, those purchases are recorded and entered into giant databases. When we buy drugs or groceries at the store, and we swipe our credit cards to pay, a record is made and kept. A child’s research for a school project, the card reader at the parking lot, your car’s conversations with a database via satellite, the online publications you read, the shirt you purchase in a department store with your store card, the prescription drugs you buy, and the hundreds of other network transactions in a typical week: all this information is recorded in various databases. Computers can inexpensively link and cross-reference such databases to slice, dice, and then recompile information about individuals in hundreds of differ-
ent ways. They can create a profile of you, based on what you buy and what you do online.

Now let's take this discussion a step further. Imagine what your world will be like once the power of social networking is sitting in the palm of your hand—in your mobile phone, or whatever you want to call it. The future is not far away. The mobile phone already knows where you are. Thanks to the Enhanced 911 mandate imposed by the Federal Communications Commission, all mobile phone companies had to introduce technology that determines the precise location of mobile handsets. This helps emergency personnel pinpoint a caller's whereabouts for 911 emergency calls.

And the mobile phone that always knows its location vastly increases its usefulness. A mobile phone that's linked to the Internet can give you directions to your meeting, the closest ATM, or coffee shop. It can give you the local weather forecast because it knows where you are and what time it is. It can give you a list of local vegan restaurants, plus the reviews of people who have recently dined there. It can even suggest where you can go to the bathroom. If you sign up with Loopt.com, you'll know where your friends are. And in the not too distant future, it will let you know about a traffic accident clogging the roads on your way to the airport—and even call the airline to rebook the flight!

This privacy may evaporate once our digital copilots get up to speed—and start keeping a 24/7/365 record of our lives. They will record our conversations and photograph people we meet; using tricks such as face-recognition software to save us the hassle of having to tag all the photos. So ubiquitous audio and video recording will soon be a fact of life. Most of the technology already exists. Cameras can fit into a shirt button or the frame of a pair of eyeglasses. The biggest stumbling block is data storage, but that will soon be solved. Clever scientists are already fine-tuning an experimental storage device the size of a sugar cube that will hold a week's worth of video.

CONCLUSION
As we have seen in this chapter, the Net Generation treats technology differently than their parents do. While TV was the signature medium of the boomer generation, the Net Generation doesn't just watch TV; they listen to it while they're chatting with friends and navigating the Web.

Now they're transforming the Internet into a place where people can communicate and collaborate and create together, and soon you will be able to access it all from the palm of your hand. We've looked at the rise of social networking sites. As we have seen, this could be the new grid for the Internet. It could have a significant impact on everything the Net Generation touches, from games to music to global civic action. The Net Generations are just starting to use the tremendous power of this digital tool, and I believe they have the power to realize the dream that many boomers had, to give power to the people.

Yet this great new opportunity also raises a significant new challenge—for privacy, the right to be left alone. Facebook is beginning to grapple with this challenge, but I don't think the Net Generations fully understand the long-term consequences of sharing intimate information about themselves with the world. But in other respects, I believe that the young people who have grown up immersed in these very technologies that are presenting such a challenge are especially equipped to navigate this new terrain. There is strong evidence, as we will see in the next chapters, that as their mastery of the Internet evolves, they will be able to adjust and handle whatever comes along.
When *Growing Up Digital* was published in 1997, my daughter Niki had just turned 14. She did her homework on the computer in her room and, like most girls her age, she loved to talk with friends on the phone. We had a phone curfew of 10 p.m., and after a while we noticed she wasn’t talking on the phone anymore. That seemed like a good thing, until we discovered that Niki was talking to her friends on the Internet via ICQ—one of the early instant messaging systems—from the moment she walked into her bedroom until she turned out the light. As her parents, our first reaction was to feel like she had tricked us, and the issue of ICQ became a sore spot for us all. But my wife and I were torn, because she was getting very good grades, and it was clear that all her friends were connected this way.

Since I was in the business of observing the impact of the Internet, I started pestering Niki with questions at the dinner table about what she was doing online. She was checking her horoscope, downloading music, researching for her homework, playing games, checking the movie schedule, and, of course, talking with friends. Niki tried to put an end to it, with a plea: “Can we have a normal conversation at the dinner table?”

For Niki, her link to the Internet was a sweet taste of freedom. She could talk to whom she wanted, find

“This is my world.”

—NIKI TAPSCOTT
out whatever she wanted, and be who she wanted to be, without interference from her parents or other adults.

We all want that sense of freedom, but this generation has learned to expect it. They expect it because growing up digital gave kids like Niki the opportunity to explore the world, find out things, talk to strangers, and question the official story from companies and governments. When teenagers in my era did a geography project, they might have cut out some pictures from their parents' National Geographic and included some information sent by the PR department of the foreign country's local consulate. Niki, on the other hand, could find significantly more interesting information just by tapping her fingers on her computer in her bedroom.

Niki and her younger brother Alex, who started playing games and drawing pictures on the Internet at age seven, were the inspiration for Growing Up Digital. It seemed that every week they would do something amazing with technology or through technology that I had not seen before. Through my experience with them and the 300 other youngsters we studied, I concluded that these kids were very different than their boomer parents. I refer to these differences as "norms"—distinctive attitudinal and behavioral characteristics that differentiate this generation from their baby-boom parents and other generations. These norms were tested in the nGenera survey of 6,000 Net Geners around the world. The list stood up pretty well.

The eight norms are: 1) freedom; 2) customization; 3) scrutiny; 4) integrity; 5) collaboration; 6) entertainment; 7) speed; and 8) innovation.

These eight norms are rooted in the different experience of today's youth—especially with regard to their media diet. They have grown up being the actors, initiators, creators, players, and collaborators. It has made them who they are—young people who are different in many ways than their parents and grandparents were at their age. The Internet has been good for this generation. And I believe that even the skeptics will see that these Grown Up Digital kids will be good for us.

**FREEDOM**

When my generation graduated from college, we were grateful for that first job. We hung onto it like a life preserver. But times have changed. Kids see no reason to commit, at least not to the first job. High performers are on their fifth job by the time they are 27 and their average tenure at a job is 2.6 years.1 They revel in the freedom. My son Alex, for instance, is thinking about getting an MBA or a law degree. But when I asked him about his immediate plans for a job, he put it this way: "A commitment of three years or more would make me hesitate. I don't want to get locked in to something I may not enjoy 10 years down the road. I want the freedom to try new and different things. If I like what I'm doing, if it challenges me and engages me and is fun, then I would definitely commit to it, I guess. I think about the time I reach age 30, I would settle on something I view my twenties as a period of self-discovery and self-realization."

Alex is typical of his generation. The Internet has given them the freedom to choose what to buy, where to work, when to do things like buy a book or talk to friends, and even who they want to be. Politicians like Barack Obama have tapped into it. Obama's iconic line, "Yes we can," has spawned a music video by will.i.am of the Black Eyed Peas, plus the spoofs—proof positive that it went viral. These three words speak volumes about the Net Gen's belief that they can do anything, that no one can tell them not to. "Yes we can" was perfectly tuned to this generation, just as the peace sign was for mine. They're on a quest for freedom, and it's setting up expectations that may surprise and infuriate their elders.

Our research suggests that they expect to choose where and when they work; they use technology to escape traditional office space and hours; and they integrate their home and social lives with work life. More than half of the Net Geners we surveyed online in North America say they want to be able to work in places other than an office. This is particularly true of white- and some gray-collar workers. An almost equal number say they want their job to have flexible hours, again with some differences among the various employee types.2

Alex doesn't buy the line that young people expect their first employers to accommodate them with flexible hours and telecommuting. "It makes young people look childish. We're not going to start making demands about hours." Alex says he and his friends want to work hard, be productive, and succeed. "I'm not sure it's a young-old thing."

Yet, in my research and in my work as a consultant to major corporations and governmental institutions, I see signs of a generational trend. They prefer flexible hours and compensation that is based on their performance and market value—not based on face time in the office. And they're not afraid to leave a great job if they find another one that offers more money, more challenging work, the chance to travel, or just a change. As one 26-year-old woman who
answered our online survey put it: “We’re given the technology that allows us to be mobile, so I don’t understand why we need to be restricted to a desk; it feels like you’re being micromanaged.”

Intel gets it. Many of its employees telework, while other staffers take advantage of flextime, compressed workweeks, part-time hours, and job shares. All the company’s major work sites offer employees great amenities, such as fitness centers, locker rooms, basketball and volleyball courts, dry cleaning, sundries, and food court–style cafes with menus that change daily. Studies repeatedly show that perks such as those offered by Intel boost employee satisfaction and performance.

So does Google. Its engineers are asked to spend 20 percent of their worktime on projects that are of personal interest to them. Google says it has a strong business case for making such an offer. If Google’s employees are the best and brightest available—and Google believes they are—they get whatever piques their personal interest could open new avenues of business for the company.

While flexible work hours and workplace amenities are routine practice at many high-tech firms, the flexible workplace philosophy is making inroads in other sectors. Best Buy, America’s leading electronics retailer, is trying to revamp its corporate culture to make its workplace more appealing to young employees. The endeavor, called ROWE, for results-only work environment, lets corporate employees do their work anytime, anywhere, as long as they get their work done. “This is like TiVo for your work,” says the program’s cofounder, Jody Thompson. By June of 2008, 3,200 of Best Buy’s 4,000 corporate staffers are participating in the ROWE program. The company plans to introduce the program into its stores, something no retailer has tried before.

There are even signs that more Net Gener will seek to own their own business, especially after they worked for a traditional bureaucratic company for a while. The appeal is having more creative control, more freedom, and no boss to answer to. In recent years, YouTube, Facebook, and Digg have emerged as outstandingly successful examples of organizations started by individuals under the age of 25. Such stories inspire other youthful entrepreneurs to pursue their dreams.

Young people insist on freedom of choice. It’s a basic feature of their media diet. Instead of listening to the top 10 hits on the radio, Net Geners compose iPod playlists of thousands of songs chosen from the millions of tunes available. So when they go shopping, they assume they’ll have a world of choice. Curious whether the African Pygmy hedgehog makes a good pet for a pre-teen? Google offers more than 25,000 links to for “African Pygmy Hedgehog,” to help the Net Gener decide. Interested in buying a book? Amazon offers millions of choices. Search for a digital camera on Froogle, Google’s shopping search engine, and more than 900,000 pages appear. The number is even greater in Asia, which has far more choice in consumer electronics than North America.

Baby boomers often find variety burdensome, but the Net Gener love it. When faced with thousands of choices, they show no signs of anxiety, from what we could see in our online survey of 1,750 North American kids. Only 13 percent strongly agree with the statement, “There is so much to choose from that when I buy something, I tend to wonder if I have made the right decision.”

Typical Net Gen shoppers know what they are going to buy before they leave the house. They’ve already checked out all the choices online, and they are well informed and confident in their decisions—83 percent say they usually know what they want before they go to buy a product. With the proliferation of media, sales channels, product types, and brands, Net Gener use digital technologies to cut through the clutter and find the product that fits their needs. And if it turns out to be the wrong choice, Net Gener want to be able to change their mind. They are attracted to companies that make it easy to exchange the product for something different or get their money back.

The search for freedom is transforming education as well. At their fingertips they have access to much of the world’s knowledge. Learning for them should take place where and when they want it. So attending a lecture at a specific time and place, given by a mediocre professor in a room where they are passive recipients, seems oddly old-fashioned, if not completely inappropriate. The same is true for politics. They have grown up with choice. Will a model of democracy that gives them only two choices and relegates them, between elections, to four years of listening to politicians endlessly repeating the same speeches actually meet their needs?

CUSTOMIZATION

Last year, someone sent me an iTouch PDA. It was sitting in a box on my desk at home when Niki and her boyfriend spied it. They were astonished. I hadn’t opened it up, so Moritz opened the box, and then hacked into the iTouch so he could give it some special features—lots of widgets, some of my favorite movies, like The Departed, plus some music from my computer, including a couple of great tunes pounded out by my band, Men In Suits, with Niki singing lead vocals and me on the keyboard. They kindly left the
hotrod PDA on my desk, with a little note. It sat there for months, until someone took it away. It's not that I wasn't grateful. I just wanted the PDA to work. I didn't need it to work for me. That's the difference between me and the Net Gen.

As a typical boomer, I took what I got and hoped it would work. Net Geners get something, and customize it to make it theirs. This is the generation that has grown up with personalized mobile phones, TiVo, Slingbox, and podcasts. They've grown up getting what they want, when they want it, and where, and they make it fit their personal needs and desires.

Half of them tell us they modify products to reflect who they are. Niki, for example, has a phone with white-and-orange swirly “wallpaper” on the screen, “My phone is an extension of me. It’s an extension of who I am. It’s like a nice handbag. It's a display of your personality.”

—NIKI TAPSCOTT

Alex has five. “My mouse is called the Mighty Mouse,” he tells me. “Each of those buttons does a separate thing, according to my interests and what I need to use it for. My left button clicks on something. The right button opens up a window, just like a regular one. The middle button is a track wheel so if I'm on a Web page or a window in my operating system I can scroll 360 degrees. On the side, if I click on one button every single window that's open on my computer will shrink down so I can choose individually. On the other side is a button that opens up my dashboard, basically, which shows me different widgets—a news widget, a wiki widget, a sports widget, a weather widget, a time zone widget, and a widget that monitors the health and productivity of my computer.” See what I mean? “It’s funny,” Alex notes. “I’m actually in the middle to the low end of technological advancement in my peer group.”

Today, the “tuner” car-customization industry, largely fueled by Net Geners, is worth more than $3 billion in North America. The trend snuck in under the radar of the big auto companies. At least one auto company, Toyota, is trying to pounce on it by introducing the Scion niche brand back in 2003. Company research shows owners spend $1,000–$3,000 on customization and accessories, from paint jobs to XM satellite radios with Bazooka subwoofers. These are kids in their twenties, and they “have changed every category they have touched so far,” says Jim Farley, VP of Scion. “It’s the most diverse generation ever seen.”

Our research at nGenera also shows that the potential to personalize a product is important to the Net Generation, even if the individual decides not to make any changes. The desire is about personalizing and accessorizing—it is more aesthetic than functional. Personalized online space is now almost obligatory; witness the popularity of sites such as MySpace and Facebook. Net Geners also customize their media. Two-thirds of early technology adopters say they watch their favorite TV shows when they want to rather than at the time of broadcast. With YouTube, television networks run the risk of becoming quaint relics. The industry will still produce programming, but where and when the programming is watched will be up to the viewer.

At work, the Net Geners will want to customize their jobs. In our online survey of 1,750 kids in North America, more than half of Net Geners said they liked working offsite. They enjoyed the change of scenery, they said, and their ability to work outside the office showed their employer they could be trusted to get the job done. They may even want to customize their job descriptions, although they still welcome some structure and want to know what is expected of them. Ideally, companies will replace job descriptions with work goals, and give Net Geners the tools, latitude, and guidance to get the job done. They may not do it on day one, though. “Demanding to customize a job description is a bit brash if you’ve only just started a job,” Alex told me. “But after a while, I think it’s fine to make suggestions on how the job could be changed or improved.”

SCRUTINY

On April Fool’s Day 2005, I decided to play a bit of a gag on my employees and associates. I asked my executive assistant to send them the following e-mail:

Through Don’s connections at the World Economic Forum, Angelina Jolie (she’s an actress who has become involved in social responsibility), who attended the last Forum meetings, is interested in Don’s work and wants to come to Toronto for a meeting to discuss transparency in the global economy. This has been arranged for Thursday, May 26th.

Don will be having a private lunch with her and will come to the office afterwards so she can meet others here and continue the discussions. The day will end with a cocktail party at Verity.

She’ll bring some of her friends.

Please confirm your attendance.

Thanks,
Antoinette
In my dreams. Anyway, not a single young member of my staff fell for the joke. I would get responses like "Nice try" and "You and Angelina. Right."

However, associates my age reacted in a completely different manner. They were falling over themselves to join the afternoon discussions and attend the cocktail party. I believe the expression is they fell for it hook, line, and sinker. And they were not happy to find out that Angelina was not going to appear.

Net Geners are the new scrutinizers. Given the large number of information sources on the Web, not to mention unreliable information—spam, phishers, inaccuracies, hoaxes, scams, and misrepresentations—today's youth have the ability to distinguish between fact and fiction. They appear to have high awareness about the world around them and want to know more about what is happening. They use digital technologies to find out what's really going on.

Imagine if Orson Welles had directed the radio version of War of the Worlds today, instead of in 1938, when it caused widespread panic as many listeners believed theMartians had actually landed. In a couple of clicks, Net Geners would figure out it was a play, not a news broadcast. No one would have had to flee their homes!

The Net Generation knows to be skeptical whenever they're online.11 When baby boomers were young, a picture was a picture; it documented reality. Not so today. "Trust but verify" would be an apt motto for today's youth. They accept few claims at face value. No wonder the 74-second "Evolution" video was such a big hit when it was posted on YouTube in October 2006. The video showed an ordinary attractive girl—the director's girlfriend, in fact—being transformed into a billboard model—considerable help from Photoshop, which lengthened her neck, reshaped her head, and widened her eyes. You could see, before your very eyes, how fake the image of beauty is in magazines and billboards. The video was made for Dove soap by a young Australian working for the Ogilvy & Mather ad agency in Toronto. It instantly struck a chord among Net Geners worldwide. Unilever, the British conglomerate that owns Dove, estimates it was seen by at least 18.5 million people worldwide on the Net, not including how many saw it on TV, where it was prominently featured on morning talk shows. Not bad for a video that cost only $135,000 to make.

But the story didn't end so well for Dove's parent Unilever. Very quickly, some young consumers took note that Unilever was also the maker of Axe, a men's cologne with a campaign of ads featuring highly sexual and exploitative photos of women. The theme was that if you bought Axe, women would be dying to strip and submit to you. As fast as you can say "mockumentary," videos began appearing on YouTube pointing out the contradiction. One, "A message from Unilever, the makers of Axe and Dove," ends with the tagline "Tell your daughters before Unilever gets to them."

Students Provide Correct Facts to Teachers
Lawrence Douglas is a professor of law, jurisprudence, and social thought at Amherst College. One day he was giving a lecture to students on the logistics of informing and training every cop in the United States about Miranda rights. "It is hard to even fathom how many officers there are in this country, at the federal, state, county, municipal, and collegiate levels," he said. "I have the number here, if you give me a second." Douglas began rummaging through his notes, trying to find this statistic he scribbled down moments earlier in his office. After 30 unsuccessful seconds, he opened up his briefcase to test his luck again. No need. By the time he had pulled the first crumpled page from the bag, help was at hand—from sophomore Adam Shniderman. He had accessed the Internet on his BlackBerry and had found the U.S. Justice Department's Bureau of Justice Statistics page. There are, it turns out, 17,876 police departments in the United States, with over 800,000 full-time sworn-in officers. The professor thanked Adam and continued on with his lecture, which was, according to student reports, fascinating.

For anyone wanting to reach this age group, the best strategy is candor. They should provide Net Geners with ample product information that is easy to access. The more they have scrutinized a product, the better they feel about purchases, especially ones requiring a large financial or emotional investment.

Boomers marvel at the consumer research available online; Net Geners expect it. When they go shopping, almost two-thirds of Net Geners tell us, they search for information about products that interest them before they buy.13 They compare and contrast product information online, and look for the cheapest price without sacrificing value. They read blogs, forums, and reviews. They're skeptical about online reviews. Instead, they consult their friends. They can be very picky. Our survey found that 69 percent of the "Bleeding Edge" (first adopters) said they "wouldn't buy a product unless it has the exact features I want." Only 46 percent of Luddites (technophobes) felt that way.14 It's easy to be a smart shopper in the digital world, and it's about to get easier. As Niki tells us, "You'll be able to scan the barcode of a product on the store shelf and up will pop information on what the product costs at other stores." Barcodes that can hold that amount of information are already registered with the patent office.15 It's only a matter of time.

Since companies are increasingly naked, they better be buff.16 Corporate strategies should be built on good products, good prices, and good values. The
Progressive Group of Insurance Companies Web site is ideally suited to the Net Generation. It provides potential customers with an online insurance quote, and calculates how much the company’s competitors would charge for the same package. Progressive believes it offers the best value in most cases, and backs its belief with facts.

Companies should expect employee scrutiny. Two-thirds of the Bleeding Edge say that they’ve searched a great deal for online information about the organization they are currently working for or about people working in their organization. Sixty percent of the same subgroup say they would thoroughly research an employer before accepting a job offer. Respondents say they want to prepare for a job interview, learn about corporate culture, and ensure that the company and job fit their needs and desired lifestyle.

"Now that I am a lawyer and I have clients, I have to be careful what I put on my MySpace page. I have actually taken things off of my page just to be safe."

— ANONYMOUS

INTEGRITY
Recently, Niki received an alarming message from one of her high school friends. The young woman, who was volunteering in Ecuador, reported that she had seen the horrible conditions of people working in the fields of roses—the dreadful chemicals sprayed on the flowers, the long hours, the child labor. Niki instantly sent the message to all her friends on her Facebook network. Now, whenever she buys roses, Niki asks questions about where they come from. She won’t buy flowers from a company that sprays poisonous chemicals on plants that children pick. It’s a small, but telling, example of the values Niki shares with her generation.

The stereotype that this generation doesn’t give a damn is not supported by the facts. Net Geners care about integrity—being honest, considerate, transparent, and abiding by their commitments. This is also a generation with profound tolerance. Alex had an experience that drove this home for me. I asked him to describe it.

My junior year, I decided to study abroad in London, England. I will always remember what one of my fellow students said the very first day. Before we began, he stood up in front of an auditorium of 250 students, faculty, and program coordinators and made this announcement:

“Hi everyone, my name is Steve, I am from St. Louis, Missouri, and, like the rest of you, I am really excited about being in London. But perhaps unlike the rest of you, I have Tourette Syndrome. So if you think you hear a donkey or a sheep in the back of the classroom, don’t hide your lunches because it is just me. Sometimes I can’t help making animal noises. Also, don’t be distracted if you hear any swear words or grunting either, because that’s me too. Thanks for hearing me out.”

With that, most people in the class just shrugged their shoulders and began making small talk with the people around them. Sure enough, the head of the program was barely able to get out a “Welcome to London” before Steve started BAAAAAing away. At first, some people did seem distracted. I personally was fascinated with him, both for his peculiar problem, and with his ballsy move at the beginning of class. I was impressed with his confidence and how honest and direct he could be about his illness, and I think everyone else was too. After a couple of minutes, it was like his illness wasn’t even there (even though his grunting and cursing still was).

Alex’s story made me flash back to when I was a kid. There would have been no student in my class with Tourette’s syndrome. More likely, he would have never made it to any university, or worse, would have been locked up in a mental institution. If he had gotten into our class, how would we have reacted to such a seemingly bizarre thing? Would we even have known about psychiatric conditions like this? Would we have just shrugged it off as Alex and his 250 classmates did? Would we have had such tolerance for diversity and such instant compassion for someone with an illness like this? Or would the stigma of mental illness have gotten the better of us? And would we have had Alex’s admiration for the courage and determination his fellow student showed?

Generation Me?
Psychology Professor Jean Twenge calls them Generation Me, “the most narcissistic generation in history.” Narcissists have a positive and inflated view of themselves, she says. They think they are more powerful and more important than they really are. It affects their personal relationships: ‘Generation Me often lacks other basic human requirements: stable close relationships, a sense of community, a feeling of safety, a simple path to adulthood and the workplace,’ she writes. Narcissists can even be dangerous, Twenge’s research suggests. They can abuse drugs and alcohol, make risky decisions, gamble in a pathological way, and even assault people. So all that praise
But is this generation really the most narcissistic ever? Twenge's claim is based on 16,000 college students who took a first-year psychology course and responded to a Narcissistic Personality Inventory. This NPI asked college students to score themselves against statements such as "I think I am a special person" or "I can live my life any way I want to." (It's a measure of personality traits, not of a disorder.) Her study reports that in the early 1980s, students answered 15 out of 40 statements in a narcissistic way. By 2006 the average score went up to 17. What's more, the percentage of students with what Twenge calls an elevated level of narcissism (a score of 22 out of 40) has gone up from one in seven students in 1982 to 1 in 4 in 2006.

This study has been widely quoted and criticized. One research group, led by a psychologist from the University of Western Ontario, challenged Twenge's findings head-on, saying there was "no evidence" that narcissism was rising in college. Another study of over 400,000 high school students found no sign of an increase of narcissism either.

We could debate her methods—are the high-scorers narcissistic or just confident? It turns out, for example, that Twenge saw a noticeable increase in narcissism in women, but not in men (based on analysis of about half the participants). Couldn't that just be a welcome sign that women were gaining confidence in themselves during that period? We could also debate her claims that the high-scorers have antisocial behaviors; other studies find that low self-esteem is the problem, not high self-esteem.

The bottom line is not what kids in a first-year psychology course write on a survey. It's what they do. As you can see from the charts, their actions do not portray a self-centered generation with no sense of community who display antisocial behavior. It's just the opposite. As the charts show, risky behavior—like smoking and drinking and teen pregnancy—has gone down. Youth crime has gone down. Volunteering has gone up. This isn't a "little army of narcissists," it's a peace corps.

Their actions show that they are confident and self-assured, with qualities that are normally attributed to leaders. It's not surprising that Net Geners display such tolerance and even wisdom, compared with previous generations. They have been exposed to a ton of scientific, medical, and other pertinent information that wasn't available to their parents. The world around them has changed, too. So it's not surprising that they care about honesty. Among other things, they have seen the giants of corporate corruption, the CEOs of Enron and other major companies, being led away in handcuffs, convicted, and sent to jail. It's far easier for Net Geners than it was for boomers to tell whether a company president is doing one thing and saying another. They can use the Internet to find out, and then use social communities like Facebook to tell all their friends.

They expect other people to have integrity, too. They do not want to work for, or buy a product from, an organization that is dishonest. They also expect companies to be considerate of their customers, employees, and the communities in which they operate. Net Geners are also more aware of their world than ever before, due to the abundance of information on the Internet.

This astuteness of the Net Generation has big implications for companies that want to sell things to Net Geners, or employ them. At a time of uncertainty, people look for companies they can trust. They have a low tolerance for companies that lie when they're trying to sell something, and they can find out pretty quickly if that's the case.

In a crowded marketplace, a company's integrity becomes an important point of difference. Net Geners don't like to be misled or hit with costly surprises, whether measured in money, time, quality, or function. Seventy-seven percent agreed with the statement "If a company makes untrue promises in their advertising, I'll tell my friends not to buy their products." They get angry when they feel they were wronged: "Blockbuster says no late fees. It is all a lie!"
said one 15-year-old boy. “After a week you have to pay $1.25 and then you have to buy the movie after two weeks. They trick you!”

Although Net Geners are quick to condemn, they are also quick to forgive if they see signs that the company is truly sorry for an error. Seventy-one percent said they would continue to do business with a company if it corrected a mistake honestly and quickly.

Integrity, to the Net Gener, primarily means telling the truth and living up to your commitments. Does it also mean doing good? Would Net Geners shun a company that pollutes on a massive scale or mistreats its employees? The survey data is not clear. Our research suggests that only a quarter take into account a company’s policies on social responsibility or the environment when making a big purchase. About 40 percent would abandon a product they love if they discovered that the company has suspect social practices. Yet my interviews with Net Geners suggest that significant numbers of them think about values before they buy. It’s not because they’re necessarily better human beings. It’s because they can easily find out how a product is made, and what’s in it. Knowledge leads to action. When you can scrutinize the environmental and labor practices of a company as readily as Net Geners like Niki can, you can make decisions on the basis of what that company is doing—not just what it’s saying.

Integrity swings both ways though. You can find plenty of Net Geners who judge companies by a very strict ethical standard, and yet they are downloading music for free—which the music industry regards as stealing. A third of iPod owners are downloading illegally, according to a study by Jupiter Research. My research suggests that’s an underestimation. According to nGenera research, 77 percent of Net Geners have downloaded music, software, games, or movies without paying for them. What’s more, 72 percent of file-sharers age 18–29 say they don’t care about the copyright status of the files they share, according to a Pew Internet and American Life Project. Most don’t view it as stealing, or if they do, they justify it in different ways. They see the music industry as a big business that deserves what it gets, or they think the idea of owning music is over. Some even think they’re doing small bands a favor.

**Do You Steal Music?**

We asked Net Geners: “Do you steal music? If you download from free sites, do you view this as stealing? If not, why not?”

**Tony, 25, Systems Analyst:** Yes I download music from the Internet without payment or borrow tunes from friends—however, I do purchase music using iTunes on occasion. This does constitute stealing because you are taking something you do not have the right to. I’m completely detached from the “victim”—in this case, massive corporations in the music industry. Does that make it right? No. That is why nowadays I make the utmost effort to pay for all digital media that I feel is of high quality and worthy of payment.

**Morris, 23, Marketing Manager:** Yes. I’m a thief. And so is everyone else I know. I do believe however that the definition of music ownership (and the transfer of ownership) is outdated. It just doesn’t fit for our generation. I guess when we come to power we’ll redefine what theft is. Hopefully we’ll also come up with a new model so songwriters, artists, and others that actually create some value get properly compensated.

**Graham, 24, Management Consultant:** The manner in which the industry generates revenue from customers needs to better incorporate value derived from concert tours, merchandise, and placement in mediums such as ads, ringtones, television, movies, or video games. The channels through which people discover, obtain, appreciate, and consume music has shifted from the past; yet the music industry has been slow to react and adapt.

**Carolina, 27, Consultant:** I don’t feel that it constitutes stealing to download music without payment or to borrow tunes from friends. If anything, I believe that this promotes new types of music that I wouldn’t have otherwise been exposed to. If I am introduced to an artist that I really enjoy I will go out and buy the CD or download the album. I feel extremely lucky to have grown up in a time when Napster was first available to flood my computer with free music.

**Alex, 22, Student:** I don’t have moral certainty about this issue. I pay for music on iTunes but I go onto LimeWire to download remixes and other things I can’t find on iTunes. In the end, though, price matters to me. I can’t afford to download 100 to 200 songs a month from iTunes’ music store.

**Alan, 23, Risk Analyst:** I am completely comfortable stealing music. I believe this stems primarily from my early experiences with Napster, and the complete disconnect between the joy I felt downloading (and listening) to music, and any sense (or perceived existence) of downside risk. The rules may be clearer now, but my view of music downloading gestated when there was no transparent and consistent approach to intellectual-property laws and enforcement.

**Morgan, 23, Video Games Developer:** No, I do not download directly from the Internet without paying, mainly because I got sick of dealing with bad downloads and viruses embedded in the programs. I do however “borrow” music from friends. I do not think it is stealing because if they got it why can’t they share it with others; same deal with letting a friend watch a video you rented, reading a book you bought, or eating half your lunch.
Joanna, 24, Publicist: No. There has to be some form of payment for the music. Whether it means that you buy a concert ticket to the artist’s show, pick up a T-shirt, etc., it doesn’t really matter so long as something is being given back so that the creative process can continue. Music is many artists’ livelihood and if they aren’t monetizing from that livelihood in one way or another then we are robbing them of their trade and ourselves of some potentially kickass art.

Graham, 24, Management Consultant: Yes. As for why, I’ll start with the observation that a 160GB iPod, sadly, does not fill itself. I think that downloading without payment, and “borrowing” from friends, has become such second nature that in the minds of many it is likely viewed as the legal equivalent of exceeding the speed limit or crossing against a light on an empty street.

Zakir, 24, IT Analyst: Yes. I also buy bootleg DVDs. Why would I pay $5 to rent a movie from Blockbuster when I can just as easily own the movie forever for $5? Maybe we are a screwed-up generation because I know I am not the only one who thinks this way.

Brandon, 26, Consultant: Yes. However I don’t consider this stealing. Buying CDs and paying for downloads is more beneficial to the record companies, not the artists themselves. Downloading is a preview—if I like the music, I will pay for a concert ticket to see the band.

There’s one clear sign that Net Generals value the act of doing good: a record number of Net Generals, as we’ll see in Chapter 11, are volunteering for civic causes. One of them even launched a magazine, aptly called GOOD magazine. Niki says 70 percent of her crowd is volunteering, and she’s an enthusiastic example. This winter, she helped organize a big fundraiser for Toronto’s Centre for Addiction and Mental Health. “We want to end the stigma against mental illness,” says Niki. Her friends have taken a big step in this direction. “A lot of my friends have anorexia or depression and like most I’ve got mental illness in my own extended family. It’s time to take a stand. We can talk about it. It’s not swept under the carpet.”

Integrity is driving their behavior in other institutions as well. They want their universities, schools, governments, and politicians to be honest, considerate of their interests, accountable, and open. As parents, the early evidence suggests, they want to run their families based on such values. This is such a hopeful finding—the biggest generation ever is demanding that companies and other institutions behave with integrity. What a powerful force for a better world.

Collaboration
At most companies, employees chat over coffee, in front of the fax machine, or by the water cooler. But at Best Buy, Net Gen store employees—some as young as 19—helped to create an entirely new kind of digital chat zone. It’s The Watercooler, a mass-communication and dialogue tool for all employees at all levels. It’s part of Best Buy’s big effort to tap the unique skills of its Net Gen employees, especially in using digital technology to get the front-line staff to contribute ideas. “The Watercooler fills a huge hole we’ve had,” said Best Buy’s senior manager of communications, Jennifer Rock. It’s “a direct line between employees in stores and all locations to talk about business topics directly with corporate leaders, teams, and with each other. In the first three months, we’ve gained 85,000 active users.”

The Watercooler is the best place for employees to get answers to their questions about things like best practices for home theater installation, or why they do not sell Dell products in their stores. It gives the company a way to mine the knowledge and experience of the entire employee population for input on weighty business decisions. “Being that Best Buy, like most companies, has traditionally communicated at employees instead of with them, we didn’t forecast how quickly The Watercooler would become this business communication tool,” said Rock. “But our employees were obviously ready.”

Net Generals are natural collaborators. This is the relationship generation. As much as I thought that I, as a 10-year-old, had a relationship with the fabulous teenager Annette Funicello on The Mickey Mouse Club, it wasn’t so. (She did eventually answer my letters, but today I wonder if they were really her answers.) They collaborate online in chat groups, play multiplayer video games, use e-mail, and share files for school, work, or just for fun. They influence each other through what I call N-Fluence networks, where they discuss brands, companies, products, and services. They bring a culture of collaboration with them to work and the marketplace and are comfortable using new online tools to communicate. They like to be in touch with their friends on their BlackBerrys or cell phones wherever they are—on the street, in the store, or at work. It gives them a sense of virtual community all day long. It makes them feel like they have a friend in their pocket.

Their eagerness to collaborate can be a bonus for companies. Net Generals want to work hand-in-hand with companies to create better goods and services, something their parents never dreamed of. Companies never thought of it either: without the Internet for a free two-way dialogue with customers, they conceived new products in secret.
Today, Net Generals are helping companies develop advertising campaigns. In one early experiment in advertising collaboration, GM invited consumers to a newly built Web site that offered video clips and simple editing tools they could use to create ads for the Chevy Tahoe SUV. The site gained online fame after environmentalists hijacked the site's tools to build and post ads on the site condemning the Tahoe as an eco-unfriendly gas-guzzler. GM didn't take the ads down, which caused even more online buzz. Some pundits said GM was being foolhardy, but the numbers proved otherwise. The Web site quickly attracted more than 620,000 visitors, two-thirds of whom went on to visit Chevy.com. For three weeks running, the new site funneled more people to the Chevy site than either Google or Yahoo did. Most important, sales of the Tahoe soared. To be sure, concern for the environment did not impede the young car enthusiasts from purchasing the Tahoe. For them, the competing norms resolved in GM's favor.

Many Net Generals are happy to help with product design. They believe they offer useful insights and like to feel part of a knowledgeable and exclusive group. They are willing to test product prototypes and answer survey questions. Half of Net Generals are willing to tell companies the details of their lives if the result is a product that better fits their needs. This number rises to 61 percent of Early Adopters and 74 percent of the Bleeding Edge. However, they hesitate to share the data if they feel a company might misuse the information, sell it to other companies, or inundate them with junk mail and spam.

Now, Net Gen consumers are taking the next step and becoming producers, cocreating products and services with companies. Alvin Toffler coined the term prosumer, in his 1970s book Future Shock, I called it prosumption a decade ago. I can see it happening now, as the Internet transforms itself from a platform for presenting information to a place where you can collaborate and where individuals can organize themselves into new communities. In the Web 2.0, new communities are being formed in social networks such as Facebook and MySpace, and these communities are starting to go into production. People are making things together. So prosumption was an idea waiting to happen, waiting for a generation who had a natural instinct to collaborate and co-innovate.

Collaboration extends to other aspects of the Net Generals' lives. At work, they want to feel that their opinion counts. While they acknowledge their lack of experience, they feel they have relevant insights—especially about technology and the Internet—and they want the opportunity to influence decisions and change work processes to make them more efficient. Making this happen requires a receptive corporate culture and the work tools, such as blogs and wikis, that encourage collaboration.

The new collaboration is not traditional teamwork at all. The difference today is that individual efforts can be harnessed on a large scale to achieve collective outcomes, like Wikipedia, the online encyclopedia written by 75,000 active volunteers and continually edited by hundreds of thousands of readers around the world who perform millions of edits per month. That would have been impossible to achieve without a new generation of collaboration tools.

These tools make collaboration on an international scale so easy, as my daughter Niki found last year while working for an international consulting company. She'd cook up an idea for a widget that might be useful for a client, and at the end of the day she'd send a message to a team of four computer developers in the Czech Republic. The next morning, there it was: a new widget ready for her to check out. "There's an old saying that two heads are better than one," she says. "Well, I say that 10,000 heads are better than 2. There are lots of smart people out there, and we should be using new technologies to tap into their talents."

Net Generals are collaborators in every part of their lives. As civic activists, they're tapping into the collaborative characteristic with aplomb. The Net Gen wants to help. They'll help companies make better products and services. They're volunteering in record numbers, in part because the Internet offers so many ways, big and small, to help out.

Educators should take note. The current model of pedagogy is teacher focused, one-way, one size fits all. It isolates the student in the learning process. Many Net Generals learn more by collaborating—both with their teacher and with each other. They'll respond to the new model of education that's beginning to surface—student-focused and multiway, which is customized and collaborative.

ENTERTAINMENT

In the high-tech world, where employers put a premium on attracting the brightest Net Generals they can find, some work sites look like playgrounds. You can play foosball at Microsoft's Redmond campus—or baseball on the company diamond or soccer or volleyball. There's even a private lake. You can take your pick of the 25 cafeterias on campus, along with the requisite Starbucks stands. Xbox consoles are stashed in alcoves. Nearly 3,000 works of art hang on the walls. You can even go on whale-watching excursions. Over at Google, there's a rock-climbing wall on the premises, along with a company pool, a
beach volleyball pit, a gym, plus pool tables. You'll feel like you're right back in college. You can even bring your pet.

These employers know that for Net Gener, work should be fun. Net Gener see no clear dividing line between the two. This may be anathema to corporate types who enjoy the grind. The old paradigm was that there was a time of day when one worked and a time of day when one relaxed and had fun. These two modes have now become merged in the same activity because Net Gener believe in enjoying what they do for a living. Net Gener expect their work to be intrinsically satisfying. They expect to be emotionally fulfilled by their work. They also see nothing wrong with taking time off from work to check their profile on Facebook or play an online game. Eighty-one percent of teens play online games—and once they get jobs, they're likely to play online games at work to blow off steam.

Employers often growl when they see Net Gener goofing off online at work. But I think that employers should cool it. What's wrong with spending 20 minutes playing an online game at work? Why is that any worse than what my generation did—amble downstairs for a coffee, a smoke, and a shared complaint, usually about management? Immersion in digital technology has taught this generation to switch very quickly between one line of thought and another. Switching off for a few minutes by playing a game can generate fresh ways to solve problems. It's arguably more productive than hunkering down and spinning your wheels for hours on end.

The Internet gives them plenty of opportunity to amuse themselves online. The Web is the fun tool of choice with which to catch up on news headlines, Google, check e-mail, and IM with friends. There's entertainment from around the world from Web sites, chatting with “Net pals,” and online gaming. There's niche entertainment that caters to their interests, such as HollywoodStockExchange.com for movie buffs, or StyleDiary.net for fashionistas. Many Net Gener maximize their interactions by engaging in multiple “netivities” simultaneously, such as chatting with friends on MSN while listening to their media player and surfing the Net. YouTube raises the bar for interactive entertainment. Users upload hundreds of thousands of videos daily, either snippets of television programs they like or content they've created. Users vote and comment on the submissions.

To be sure, employers who allow Net Gener to amuse themselves online or wear headphones, need proper work design and policies to maximize productivity. In some situations, listening to music on headphones at work is fine, while in other situations it might not be. Notwithstanding the Net Gen ability to multitask, it's best to minimize distractions, including online ones, for work that requires deep thinking.

Net Gener's love of entertainment also has important implications for companies that want to sell things to them. Nearly three-quarters of Net Gener agreed with the following statement: “Having fun while using a product is just as important as the product doing what it is supposed to do.” Net Gener value the experience of using the product beyond its primary function. They find amusement in accessory options and playing with tactile features, particularly younger males. Net Gener become bored easily, so playing with their tech devices keeps them interested.

Still, making a product fun as well as useful presents a challenge to companies targeting the generation. How, for instance, do you make a mortgage fun? Well, take a look at what MtvU, the national network for college students, is doing as part of its campaign to help Darfur. On the site, the network launched an audacious game that asked players to put themselves in the shoes of a teenager in Darfur faced with a terrible decision of whether to go and get water before the bloodthirsty militia roll in. Millions of kids have played the game online—a testament to the power of the “games for change movement.”

SPEED

When I began working with computers, I used a 360-bits-per-second dial-up modem to write my first book from my home office. Fifteen years later, when I wrote Growing Up Digital, the typical access rate was 9,600 bits per second. Many young people today access the Web at between 5 million bits per second and 65 million bytes per second!

Having grown up digital, they expect speed—and not just in video games. They're used to instant response, 24/7. Video games give them instant feedback; Google answers their inquiries within nanoseconds. So they assume that everyone else in their world will respond quickly too. Every instant message should draw an instant response. If a member of their peer group doesn't respond instantly, they become irritated and worried. They fear it may be a negative comment on their status and a personal slight. “IM has made this worse, because if someone sees you online and you don’t answer, they know you are ignoring them,” a 28-year-old man said in our online survey.

Net Gener also expect to receive an item they have purchased within a
matter of days. They are no longer willing to wait four to six weeks to receive their secret decoder ring after sending in their cereal box tops. Corporations that are quick to respond to inquiries are praised and viewed as trustworthy, while long wait times are criticized. Needless to say, Net Generals do not like being put on hold.

When they e-mail a company, 80 percent expect an answer back quickly. But when they talk to their friends, e-mail is too slow for this generation, too cumbersome. They prefer the speed of instant messaging. They're impatient, and they know it. When we asked them what they thought of the following statement—"I have little patience and I can't stand waiting for things"—56 percent agreed.35

It makes working in the conventional office hard. "Working in a typical company can really sap one's energy because things happen so slowly," said Net Generals Moritz Kettler. "A lot of my friends tell me they are frustrated with the glacial pace of decision making. There is a lack of urgency. There's no 'let's get this done.' There is a big culture clash in the workplace with my generation and the bosses, who can often be much older."

The pressure of living in an instantaneous environment can overwhelm some Net Generals. They know others are expecting an immediate response from them, and many experience feelings of saturation, craziness, and never having a moment of peace. Some wish they could disconnect by turning off their cell phones and logging off their computer, but they're reluctant to do this because they fear missing an important message and don't want to feel detached from their social environment.

E-mail is faster than talking, which is why Net Generals often prefer to communicate with people at work via electronic means rather than meeting them—unless it's a first-time meeting or an important negotiation.

Many Net Generals would like their careers to progress at the same fast pace as the rest of their lives. They appreciate continual performance feedback from employers. It helps them gauge their progress and enhances their professional self-esteem and sense of career momentum. Loyalty is strengthened when Net Generals regularly receive feedback that helps them feel "on track" to being successful at the company. Conversely, loyalty may weaken if requests for regular feedback are not acknowledged in a short time frame. This alone may not cause them to switch jobs, but they will feel less emotionally satisfied at work.

INNOVATION

When I was a kid, the pace of innovation was glacial. I remember when the transistor radio came on the scene. I got one and took it to summer camp. We all had one. It was a wonderful innovation. And that radio and its predecessors didn't really change for years. I also remember our first television. That thing lasted for many years as well, until a new innovation—color—appeared on the scene.

This generation, on the other hand, has been raised in a culture of invention. Innovation takes place in real time. Compare my transistor radio that lasted for years with today's mobile devices that improve, sometimes dramatically, every few weeks. Today my kids want the new mobile device every few months, because the current one doesn't have the capability of the new one. And as for televisions, flat panel technology is an engine of innovation, dropping in price significantly every 18 months or so.

For marketers, there is no doubt that Net Generals want the latest and greatest product available—in ways that supersede the needs of their parents. The Net Generals live to stay current, whether it's with their cell phone, iPod, or game console. The latest product makes their friends envious and contributes to their social status and their positive self-image.

Motorola came out three years ago with the RAZR, its ultrathin cell phone with built-in camera and music player. Samsung Group answered within a year with the Blade. Motorola responded with its SLVR, a phone even sleeker than its predecessor. "It's like having a popular nightclub. You have to keep opening new ones. To stay cool, you have to speed up," says Michael Greenes, president of market research The Diffusion Group.

For Niki, her latest innovation is the Nike+ iPod Sport Kit. The Sport Kit allows a Nike+ shoe to talk to an iPod nano. The sensor uses a sensitive accelerometer to measure a runner's activity; then it wirelessly transfers this data to the receiver on the runner's iPod nano. As Apple's Web site says: "You don't just take iPod nano on your run. You let it take you. Music is your motivation. But what if you want to go farther? Thanks to a unique partnership between Nike and Apple, your iPod nano becomes your coach. Your personal trainer. Your favorite workout companion." As you run, iPod nano tells you your time, distance, pace, and calories burned via voice feedback that adjusts music volume as it plays. In addition to progress reports, voice feedback congratulates you when you've reached a personal best—your fastest pace, longest distance and time, or most calories burned. Voice feedback occurs automatically, according to predetermined intervals that vary by workout type. Niki loves her Nikes and nano: it helps keep her fit.

In the workplace, innovation means rejecting the traditional command-and-control hierarchy and devising work processes that encourage collaboration and creativity. Former chairman and chief mentor N. R. Narayana Murthy at the Bangalore-based Infosys Technologies introduced the company's "voice of youth" program eight years ago. Each year, nine top-performing young
employees—all under 30—participate in eight senior management council meetings, presenting and discussing their ideas with the top leadership team. “We believe these young ideas need the senior-most attention for them to be identified and fostered,” says Sanjay Purohit, associate vice president and head of corporate planning. Infosys CEO Nandan M. Nilekani concurs: “If an organization becomes too hierarchical, ideas that bubble up from younger people [aren’t going to be heard].”

Infosys is on the right track. Net Geners don’t want to toil in the same old bureaucracies as their parents. They’ve grown up in an era of constant innovation and change, and want the workplace to be equally innovative and creative. Net Geners told us an innovative work environment is perceived to be leading edge, dynamic, creative, and efficient. Not surprisingly, an innovative workplace is expected to have leading-edge technology.

These are the eight norms of the Net Generation. They value freedom—freedom to be who they are, freedom of choice. They want to customize everything, even their jobs. They learn to be skeptical, to scrutinize what they see and read in the media, including the Internet. They value integrity—being honest, considerate, transparent, and abiding by their commitments. They’re great collaborators, with friends online and at work. They thrive on speed. They love to innovate. This is the Net Generation, and in the next few chapters, we will explore how these characteristics are displayed in different spheres of the Net Gen life and how, if you understand these norms, you can change your company, school or university, government, or family for the twenty-first century.

---

**THE NET GENERATION BRAIN**

When he was a premed student at the University of Rochester, C. Shawn Green used to stay up late on a lot of nights to play Counter-Strike. It’s an action-packed video game that pits a team of counterterrorists against a team of terrorists. One morning in September 2000, Green sat down in front of his computer, not to return to the game, but to work on an experiment being conducted by the university’s Brain and Vision Lab.

Something was wrong. The experiment was supposed to test whether deaf people had quicker visual reflexes than people with hearing. Participants had to identify an image flashing quickly on a computer screen that was filled with visual clutter. If the average Joe could pick out the target 50 percent of the time, would deaf people do better? But when Green took the test himself, he scored 100 percent. It must be a programming mistake, he thought, so he dragged his best friend into the lab. His buddy scored 100 percent too. Now Green was pretty sure there must be a programming error. So he brought a second friend into the lab. This one scored only 50 percent, just as expected.

What was happening? Then the light went on. Green and his best friend played video action games all night, while the other guy didn’t. He was too busy being a resident advisor, helping out the younger students on his dormitory floor. It may not sound like an insight that ends up in the pages of the world’s leading scientific journals, but it was. Green had stumbled onto concrete
### TABLE A.1 THE NET GENERATION IS A GLOBAL FORCE

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>India</td>
<td>593,293</td>
<td>52%</td>
<td>46%</td>
</tr>
<tr>
<td>China</td>
<td>501,558</td>
<td>38%</td>
<td>-9%</td>
</tr>
<tr>
<td>United States</td>
<td>105,246</td>
<td>35%</td>
<td>11%</td>
</tr>
<tr>
<td>Brazil</td>
<td>87,437</td>
<td>47%</td>
<td>22%</td>
</tr>
<tr>
<td>Mexico</td>
<td>50,986</td>
<td>49%</td>
<td>14%</td>
</tr>
<tr>
<td>Russia</td>
<td>46,209</td>
<td>32%</td>
<td>-15%</td>
</tr>
<tr>
<td>Japan</td>
<td>31,846</td>
<td>25%</td>
<td>-27%</td>
</tr>
<tr>
<td>Germany</td>
<td>21,655</td>
<td>26%</td>
<td>-20%</td>
</tr>
<tr>
<td>France</td>
<td>19,029</td>
<td>31%</td>
<td>-7%</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>18,675</td>
<td>31%</td>
<td>-10%</td>
</tr>
<tr>
<td>Spain</td>
<td>11,500</td>
<td>27%</td>
<td>-27%</td>
</tr>
<tr>
<td>Canada</td>
<td>10,004</td>
<td>31%</td>
<td>-4%</td>
</tr>
</tbody>
</table>

Source: U.N. Department of Economic and Social Affairs, Population Division

---

### NOTES

**INTRODUCTION**

5. Ibid., Damon, *The Path to Purpose*, 3.

**CHAPTER 1**

4. Ibid., inspired by Geraci et al., “Meet the Net Generation.”
18. Ibid., 12.
24. Judy Sheindlin, a judge on the juvenile bench in New York City for 24 years said: “You’re dealing with a population of kids who have been deprived of their childhood. They don’t think of themselves as growing old. They are out for immediate gratification.”
27. Ibid., 15–17.
28. Ibid.
33. Jon Stewart’s address is at www.wm.edu.
NOTES


20. Ibid., 18.


CHAPTER 3


8. Ibid.


11. Almost two-thirds of Net Geners tell us they search for information about products that interest them before purchase. They compare and contrast product information online; they read blogs, forums, and reviews; and they consult friends. In the digital world, it’s easy to be a smart shopper. Those at the top of the technology-adoption curve were the most demanding: our survey found that 69 percent of the Bleeding Edge or first adopters said they wouldn’t buy a product unless it has the exact features I want.” This number slowly dropped as one went down the technology scale, reaching a level of 46 percent for Luddites. Almost two-thirds of Net Geners say they take the time to find the lowest price, which isn’t surprising, since many work for minimum wage or a limited salary. They want value without jeopardizing quality. Interestingly, most Net Geners are dubious about online reviews, thinking many are the product of disgruntled buyers. “People who write reviews are those who are really bitter about stupid little things,” a 22-year-old woman told our researchers. Only 15 percent of Net Geners as a whole agreed with the statement; however, when we study the statement, “12. “Campaign for Real Beauty,” Internally computed numbers, Dove, www.youtube.com, April 30, 2008. Number of views tabulated on April 30, 2008, includes multiple copies of identical videos posted to YouTube; includes only videos with more than 100,000 views.


14. Ibid.


18. Ibid., 223.
20. Kali H. Trzesniewski et al., “Do Today’s Young People Really Think They are So Extraordinary? An Examination of Secular Trends in Narcissism and Self-Enhancement,” Psychological Science, vol. 2, no. 19, Feb 2008, 181–188, http://lib.bioinfo.pl/pmid:18271867. (University of Western Ontario psychologist Kali H. Trzesniewski led a study of 26,000 students at the University of California from the early 1980s to today. She found no evidence of an increase in narcissism. What’s more, when she looked at a far bigger group—over 400,000 high school students—she found no evidence over the past 30 years that they are more narcissistic either.)
24. Ibid.
25. Ibid.
33. Lee Rainie, “Digital ‘Natives’ Invade the Workplace: Young people may be newcomers to the world of work, but it’s their bosses who are immigrants into the digital world,” Internet Survey, Pew Internet and American Life Project, September 27, 2006, www.pewinternet.org.