# Book Born Digital

## Understanding the First Generation of Digital Natives

John Palfrey and Urs Gasser
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## Recommendation

Many kids under the age of 15 have no idea what a typewriter is. Why would they be familiar with such an outmoded, archaic tool? They are members of "the first generation of digital natives." Internet and law experts John Palfrey and Urs Gasser offer an accessible, informed and concerned investigation into cyberculture. Although they often indulge in platitudes and generalizations, they bring a new, useful focus to the discussion. They delve into such important issues as privacy and Internet safety, and they examine how these issues affect young people, in particular. Of necessity with this kind of structure, the authors repeat some of the same points, such as the glut of information and the interconnected nature of online life – but they do so to show how these core factors affect different areas. *BooksInShort* recommends this book to lawmakers, hiring managers, teachers and parents who want to understand life in the cyberculture.

## Take-Aways

- The generation that has grown up with the Internet has values and assumptions that are different from earlier generations.
- For these "digital natives," personal identity is fluid and multifaceted.
- They are accustomed to having their lives continually recorded, although this produces massive "dossiers" of unsecured information and invades their privacy.
- Digital natives trust too readily and share too much information online. Teachers and parents must guide them.
- Most of the risks digital natives encounter online are old threats in a new environment.
- In an explosion of creativity, digital natives create and collaborate, and remix old works.
- Their file swapping has defeated the music industry and old copyright models. New arrangements are emerging.
- Digital natives face an information glut and have trouble identifying quality information.
- No one knows the best way to integrate digital technology into education.
- Digital natives think of themselves as global citizens.

## Summary

### Who are the "Digital Natives"?

Digital natives are people born after 1980, who have spent their lives exposed to digital media. (Not all young people are digital natives: The access to computers, cell phones, social networking software and video games that defines them is not universal; geography and culture may limit it.) Digital natives act so differently, in so many ways, from non-natives that they sometimes seem like a new subspecies.

> "Young people – among many others – are using the Internet to share more personal information about themselves than ever before."

Many of their differences are positive: Digital natives have an almost instinctive fluency with new technologies, and they have always been connected to one another. They assume quick, easy access to information, and they collaborate readily. However, they don't draw the previous generation's distinction between life on- and offline. They share details of their lives that force older ideas of private and public to mutate. Digital natives need help from parents, educators, business and government to deal with the changes constant access to technology has caused.

### Identity and Information

Broadly speaking, everyone has two identities:

1. **"Personal identity"** – Everything that makes you special and unique.
2. **"Social identity"** – The things others know about you and your position in society.

> "In the digital age, people trade convenience for control all the time."

If you lived in a preindustrial society, you could change either of these only with effort; in fact, changing your social identity would generally have required relocating. In an industrial society, even that might not work, because of public records.

In the digital age, as people join and leave social networks, they can alter their social identities easily. At the same time, remnants of past social identities hang around for a long time, resurfacing long after their owners have left them behind. Facebook photos, blog posts and avatars, or cyber personalities, in online games can leave traces of identities for others to find. Young digital natives do not always understand how to manage their fluid identities.

> "The problem with the rapid growth of digital dossiers is that the decisions about what to do about personal information are made by those who hold the information."

Digital natives – and anyone who uses the Internet – must understand that governments, corporations, social networking sites and even Web sites are constantly compiling profiles of "personally identifiable information" (PII) about them. Some of these entities do it so they can serve their clients better and others for less positive reasons. However, in all cases, strangers are the ones assembling the files, which start even before birth with sonograms and prenatal tests. Digital natives are so used to having everything they do mediated and recorded that they don't understand the risks associated with these profiles.

> "The more sophisticated the young person is about online life in general, the less likely he or she seems to be to trust other people online."

Your digital "dossier" may include private comments that you originally meant to share only among friends; medical information, which insurance companies can use as an excuse to increase your premiums; and information on sexual habits and drug use, which could cost you a job. Each organization assembling these dossiers follows different security protocols, some of which are quite lax. For example, in 2005, ChoicePoint, a "commercial data broker," accidentally released information about more than 100,000 people, some of which went to "fraud artists."

## Privacy and Trust

Because so much information is generated and stored on the Internet, digital natives' expectations about privacy differ from those of earlier generations. They see privacy as mutable and negotiable. They may share personal information to join online communities or simply because someone asks them. The social cues young people use to guide their judgments in the physical world are absent in the virtual world. As a result, they trust too readily and share too broadly. To address this problem, people should pressure online services to ask for smaller amounts of personal information from users and to protect the information they gather more effectively. Legislation should govern the storage and sharing of sensitive information. Digital natives need guidance from teachers, parents and other mentors about whom to trust and with whom to share.

## Safety

However, rather than helping digital natives understand privacy and deal with information flow, parents and other elders tend to focus on another issue: safety. Online safety is a real concern, and a number of disturbing cases have understandably focused attention on the issue. Safety concerns fall into several categories:

- **Spending too much time online** – In China, facilities for drug and alcohol addiction also treat "Internet addiction."
- **Exposure to inappropriate material** – On the Internet, children may encounter pornography, violence or hate speech. However, teens who view pornography online are usually looking for it; they don't stumble across it by accident. And, while the Internet has enabled certain sexual predators to engage in creepy behavior, it does not cause this behavior or the twisted sexuality that drives it.
- **The misuse of the Internet for cruel or criminal purposes** – The anonymity of online interactions sometimes encourages casual cruelty such as "cyberbullying" and stalking. However, bullying online arises from the same roots as bullying in the physical world. The right to free speech protects much bullying in the U.S., so the government is unlikely to help with this problem.

> "A study...showed that 41% of Facebook users were willing to give up personal information to a complete stranger – even to a person who was completely made up."

Caring older mentors can help digital natives navigate the threats. Parents and teachers should talk to children about their online activities and warn them about risky behavior. They should inspect the sites their children use, paying special attention to the sites' security policies. If necessary, they can install "kid-friendly browsers," which exclude inappropriate material. Parents must help their children to make good decisions in the online world just as they help them to do in the physical world. The more sophisticated digital natives are about risks and how to respond to them, the more likely they are to choose wisely.

> "Creativity is the upside of this brave new world of digital media. The downside is law-breaking."

Online culture includes violent video games, in which players receive rewards for engaging in vicious acts. For example, after the shooting at Virginia Tech, a young Australian created a game called "V-Tech Rampage," in which players had to kill the named victims of the actual assault. According to researchers, in addition to being emotionally and morally disturbing, such violent images have some influence on action, especially among the young.

> "Unlike the cost of producing a traditional movie or record, the art forms that digital natives are pioneering cost very little."

But look past the hype. Some kids play violent games, but others play nonviolent, educational ones. And, kids rarely play video games alone. Instead, more than half the time gamers play with friends, and a quarter of the time they play "with a spouse or parent." Combine family discussions about violent images with other tactics for addressing violence on the Internet. New rating symbols, whether voluntary or government mandated, could guide both children and parents to make better choices.

## Creativity

To an unprecedented degree and in completely new ways, digital natives are creative. Access to technologies such as cameras, software and Web sites makes creating artworks cheap, fast and easy. Digital creations range from new songs or movies, to "mash-ups" that combine two or more music tracks together, to videos or cartoons

with commentary that generates new messages. "Fan fiction," in which writers reuse characters from favorite books, movies or TV shows, predated digital technology. However, fan Web sites have created an explosion in this genre. The Harry Potter fan fiction Web site includes "more than 45,000 stories."

> "Medical records, academic history, credit-card information, online banking transactions...Most are in the 'deep Web,' where search engines today cannot reach."

Digital natives aren't creative only in the arts. They have also collaborated on reference works such as Wikipedia, generated story lines in "Massively Multiplayer Online Games (MMOGs)," such as *World of Warcraft*, and started blogs that compete with established news sources. Digital natives assume you want their feedback on any product or published work. Some have even started blogs that monitor the quality at their favorite restaurants. They don't expect to be paid, but they do expect a response.

### Digital Piracy

In the heyday of the Napster file sharing site, users were swapping about "2.8 billion files per month." Album sales plummeted. The music industry fought back with lawsuits and technology that makes files harder to copy. It has won a few battles, such as shutting down Napster and fining individuals, but it's losing the war. Digital natives don't see why they should pay a lot for music, and they don't believe they're hurting anyone. Stricter copyright laws are not the answer. Instead, the solution will evolve from a combination of market alternatives such as iTunes, which allow inexpensive, legal file sharing, new models of copyright and public education about why digital piracy is illegal.

### "Information Overload"

Previous generations faced information scarcities, but digital natives don't have that problem. Information overload can overwhelm the human mind and reduce people's capacity to make good decisions. While young people are spending more time every year online, they're not spending less time listening to music or watching television. Instead, they're multitasking. They may be better at it than their elders, since they've had more practice, but distraction is not the best mindset for learning or critical thinking.

> "The best regulators of violence in our society, whether online or not, are parents and teachers, because they are the people closest to digital natives themselves."

While the collaboratively written reference work Wikipedia generally produces reliable stories, it has also published entries with glaring errors or outright lies. When amateur researchers collaborate in a new environment, they inevitably make mistakes. The Internet is full of bad information. Yet, people consult it about important issues. For example, almost 80% of 18-29 year olds who use the Internet have looked up "health-related issues," and one-fifth of teens go online to find help with tough topics like drugs and sex.

> "Inasmuch as we should be worrying about the danger of violence on the Internet, we should be worrying about kids hurting each other psychologically – and not as focused...on adults hurting kids physically."

Digital natives often default on the challenge of determining if online information is trustworthy, instead deferring to search engines or aesthetics: they choose sites that are easy to find and look good, rather than sites with good information. To help children evaluate information, turn to the free market, which has instituted rating systems and "certification programs" that verify quality. Online "social norms" are also leading to improvements, in Wikipedia, for example. However, expect only limited help from government, since regulating information quality is a slippery free-speech challenge. Ultimately, identifying reliable information requires critical thinking. Take this opportunity to educate your kids on the issue.

### Digital Natives, Education, and Activism

Digital technology is transforming education. However, technology is changing so fast that educators and administrators often are not sure what to do with it: Harvard went to the expense of installing Ethernet jacks in each desk to allow every student to access the Internet from his or her laptop, only to find that students didn't use them because they preferred wireless Internet access.

> "The most visible effect that digital natives are having on business is as entrepreneurs who threaten to take down giant, long-established industries."

Research now takes place in the virtual rather than the physical world, and digital natives assume access to information from around the globe. They also assume they'll be able to interact with it, comment on it and republish it. They are actively engaged in their education in new ways. Schools should build on this interactivity with the world, and help students learn the skills they need to flourish in such an environment.

> "Badly designed and overarching privacy legislation can hamper innovation."

Although educators may not have known what to do with digital technology, politicians jumped on it. Political parties are using the Internet to raise money, distribute information and encourage young people to vote. People living under repressive regimes are using the Internet to document abuses, get their stories out to other countries and monitor election fraud. Such regimes are now monitoring or censoring the Internet. However, in general, the Internet is having a liberating, equalizing effect on politics, and digital natives think of themselves as citizens of the world.

## About the Authors

**John Palfrey** is the vice dean of the Harvard Law School and chairs the Internet Safety Task Force. **Urs Gasser** teaches law at University of St. Gallen and has written or edited six books.