

Tech gets a time-out

Charges of hypocrisy be damned: **Some Silicon Valley tech wizards** are quietly raising their kids outside the lurid digital landscape that their own industry calls childhood.

By Dan Fost, Photography by Jonathan Snyder

The earthquake rips through the streets, swallowing trees and cars and people—everything except John Cusack and his family. Cusack, of course, expertly navigates the destruction that stays just an inch or two behind them. His limousine careens past falling buildings and over huge gaps in the roadway, but the audience knows it's way too early in director Roland Emmerich's end-of-the-world disaster flick *2012* for anyone vital to perish.

Gary Yost, creator of the groundbreaking software 3D Studio Max, sits in a darkened Fairfax theater and laughs. Afterward, he marvels, horrified: "Some people will take their kids to that movie." Yost says he would lock his nine-year-old daughter, Ruby, in a closet before he'd let her near it—or anything like it. He came to see the film at the invitation of some old colleagues who worked with him on 3D Studio Max, which he created in the early 1990s as a design tool for architects and engineers, but which is now owned by Autodesk (and sold as 3ds Max) and widely used to make video games and movie special effects, like the earthquake sequences in *2012*.

You'd think a guy like Yost would be the coolest dad at his kid's school, what with all the whizbang, exploding action effects he helped create. But he keeps that part of his life quiet, because Ruby goes to Greenwood School in Mill Valley, a Waldorf-inspired institution that bases its curriculum on the teachings of early-20th-century philosopher Rudolf Steiner, who emphasized an experiential type of learning. You won't find a single computer in any of the classrooms at Greenwood, which runs from preschool through eighth grade. Not only that, but Waldorf schools—and there are several ringing the San Francisco Bay—discourage "screen time" of any kind, both at school and at home, and especially before sixth grade. That means no TV, no texting (OMG!), no Facebook, no IMing or surfing the Net, and no video games like the ones made with Yost's software.

It's easy to imagine the typical Waldorf parents in the Bay Area: some earthy-crunchy-green types, some old Deadheads sipping kombucha and driving Priuses. And it does have its share of those. But you'd be surprised to learn just how many Waldorf mothers and fathers come from the exalted world of high-tech, like Yost does. In fact, a significant number of parents at Greenwood—and at San Francisco Waldorf and the Waldorf School of the Peninsula—work at some of the very companies whose products the Waldorf schools train their students to avoid. Their ranks include an executive speechwriter at Google, a former Apple marketing manager whose job it was to get computers into classrooms as early as prekindergarten, the chief technology officer of eBay, a cofounder of legendary children's-software maker Broderbund, and the CEOs of several high-tech startups—all folks you might expect to enroll their kids at schools like those in Tiburon's Reed Union School District, where even kindergartners get lessons on computers. Instead, these digital-age parents have opted for a homespun environment where children handwrite their own textbooks, learn to knit in first grade, and spend two years in kindergarten communing with gnomes and fairies (no ABCs in sight). Then these parents push against the currents of the culture and their own industry by continuing an anti-tech lifestyle at home.

Just how radical a decision have these tech types made? Consider a day in the life of a typical plugged-in student. According to a Kaiser Family Foundation study released in January, kids from 8 to 18 spend 7 hours and 38 minutes a day interacting with some form of media—and often two or three at a time—be it a smartphone, music player, computer, television, magazine, or game console. OK, 38 minutes of that is for print, including books—but on top of the seven and a half hours, they spend half an hour talking on the phone, and teenagers spend another hour and a half texting. And this digi-engagement is not likely to slow down, especially in the Bay Area, which incubates this stuff faster than a five-year-old can say Twitter. After January's event announcing the release of the Apple iPad, Yost declared that he was not going to buy one and would make every effort to keep it away from his daughter. "This would be like crack cocaine to her," he says.

Many of these low-tech high-techers feel that there's just no rush: Kids can learn the gadgets quickly enough at a later age. But there's also a growing undercurrent of real concern that some of these devices and services are worse than unnecessary—they're actually bad for kids. Not all of the Waldorf parents were willing to talk about it for print—this is, after all, the industry that gives them their stock options and that depends on getting young people hooked on its products—and not all agree that it is truly harmful. But as the tech explosion keeps

accelerating, and as we hear more and more about social-networking addiction and other modern afflictions, some of these parents are starting to wonder what they've wrought.

Connected to the Internet through portals created in the Bay Area, curious kids as young as 7 or 9 or 11 have unfettered access to a vast arsenal of the most monstrous, insipid junk: absurdly violent war games, thousands of videos of teenagers playing drinking games, crazy-making social experiments like Chatroulette (don't ask), and millions of pages of porn so vile it makes grown men turn away. Parents also worry about the sheer amount of time kids spend plugged in: the mental energies dissipated, the social opportunities missed, the books not read.

Stephanie Brown thinks they're right to worry. She's the director of the Addictions Institute, in Menlo Park, which runs an outpatient counseling and therapy program, and she's starting to see kids as young as 10 who are hooked on digital media. The symptoms are strikingly similar to those of any other addiction, she says: compulsivity, cravings, irritability, sleep disorders. "These kids build their day around their engagement with technology, and over time, they need more and more and just can't stop." This February, Brown spoke to a group of eighth-graders who clearly weren't new to the concept. She asked them if they'd ever experienced a craving, and "all the hands went up, so I asked for examples," she recalls. "They said chocolate, Doritos, Coke, and then someone said 'video games,' and there was a huge laugh." Other kids are just too young to know they're being sucked in. A second-grader I know told me he wants an iPod. I asked him why, and he said, "I don't know."

It's no coincidence that Brown has a front-row view of the problem, given that her practice is smack in the middle of Silicon Valley—or that the first *New York Times* story to deal with Facebook addiction opened with an anecdote from San Francisco University High School, one of the most academically intense schools in the city, and included another from Oakland's Head-Royce, also an elite private school. Here, perhaps more than anywhere else, technology is on trial.

No one really knows what the long-term effects will be of the profound infiltration of media and technology into everything we do. So far, there's been a lot more hand-wringing than hard science. But the concerns of the high-tech parents who have chosen Waldorf make it easier to imagine the worst. In 2012, the movie created partly with Yost's software, John Cusack's character is the quintessential computer fanatic, spending time on his laptop when he should be engaged with his kids—and his teenage son is glued to his cell phone for most of the film. When Cusack takes the kids to Yellowstone National Park, the boy texts his stepfather, "Camping sucks!" Is it any coincidence that an hour later, the world comes to an end?

I should tell you right now: I, too, am a Waldorf-inspired parent. My son, Harry, is in fourth grade at the same school where Yost's daughter goes, and although I don't work in the tech industry, I have covered it extensively for the past 13 years. Like any other professional Bay Area parent, I also spend way too much time on my computer and my iPhone, on Twitter and Facebook. But I keep my son off all these tools as much as possible. We don't have cable or satellite TV, and we only occasionally watch a video or a DVD. We read newspapers, magazines, and books and play baseball and board games.

Even before Harry was born, I had already banished television from my house—not out of high-mindedness, but because I was all too familiar with its allure (in the old days, I had watched for hours on end). Also around the time of Harry's birth, the American Academy of Pediatrics recommended that kids under age two not watch any television at all. Coincidentally, Harry wound up in a preschool that similarly discouraged media use, but our local public elementary school had TVs in every classroom. They used them only on rainy days, the teacher said, but when we visited Greenwood, we were told that on rainy days, the kids put on their raincoats and go out to play. That sealed the deal as far as my wife and I were concerned: We wanted Harry's school to reflect the same values we were trying to instill at home. But if Silicon Valley had its way, there's no telling how deeply technology would reach into classrooms—or childhood in general. Last October, I attended a conference at Google's spectacular Mountain View headquarters (aka the Googleplex) called "Breakthrough Learning in a Digital Age," which presented the idea that tech-skittish schools and teachers (and presumably parents) need to get over their fears and embrace this brave new world.

Attendees listened to Karen Cator, then director of education leadership and advocacy for Apple, who complained of "climates within schools that really shut down innovation and creativity." Two presenters showed an iPhone app that lets kids rewrite children's stories, inserting their voices into tales like "The Three Little Pigs." And a high school principal from the Bronx described how giving his students laptops had boosted the percentage of kids who scored at grade level in math from 9 percent to 62 percent in just four years.

Marissa Mayer, Google's vice president of search products and user experience, used her talk to refute the 2008 *Atlantic* cover story from the magazine's all-time bestselling issue, "Is Google Making Us Stupid?" The piece,

by Nicholas Carr, didn't go after Google per se: Carr contended that the result of so many small bites of information online "is to scatter our attention and diffuse our concentration." Mayer argued instead that "by having the world's information available at your fingertips, it frees you up from necessarily having to memorize a lot of rote facts." She cited a study by Gary Small, a professor of psychiatry and biobehavioral sciences at UCLA, that showed that people who searched the Internet for one hour each day for a week experienced "increased neural activity in the part of the brain that controls decision-making."

The highlight of the conference was a talk with Google cofounder Sergey Brin. During lunch, Brin took the stage for an interview with *Atlantic* editor James Bennet. Wearing colorful Five Fingers shoes that fit his feet like rubber gloves, Brin talked about his own upbringing, including some happy time spent at a Montessori school, and said that the American educational system needed to pay teachers more and incorporate more technology. "In addition to doing their book reports on *Catcher in the Rye*," he said, "[students] can also write a Wikipedia article on something that has not been written about before."

When lunch was over, I had a chance to talk to Brin, and he was appalled when I told him about my son's computerless school. "I think it's kind of weird not to have computers," he said. "Would you deny paper and pencil, and carve into tablets only? It's a modern tool. It just needs to be managed correctly."

Although Brin's words stung, the idea certainly wasn't new to me. In fact, before Harry was born, I wrote an article for the *Marin Independent Journal* calling on schools to get with the program and train their teachers in the digital arts. Yet by the time Harry was ensconced in the Greenwood world, my wife and I had become suspicious of the whole notion of technology as an innocent tool—a notion that Todd Oppenheimer, a Waldorf parent at the San Francisco school, attacks effectively in *The Flickering Mind: Saving Education from the False Promise of Technology*. "There are tools that build our physical and conceptual skills, and there are tools that make those skills lazy, that do the work of our bodies and our minds for us," he says.

Greenwood parent Gary Carlston, a cofounder of Broderbund Software, which made some of the bestselling educational CD-ROMs of the 1980s and 1990s ("That was before I had kids," he notes, almost sheepishly), agrees. "The paradox with computers is that they're so good, everything is done for you," he says. "We have to give kids creative tools, so that when technology is introduced, they can do something with it, rather than passively let it do something to them."

Carlston knows about tech-induced passivity: He saw it in his own sons, whose introduction to technology felt to him like a fall from Eden. In the early 1990s, Carlston had left Broderbund and the Bay Area and was living part-time on a 500-acre ranch in Breckenridge, Colorado, where he and his wife had adopted four children. Some of them had likely spent hours alone in front of the TV at very early ages. One couldn't speak when he joined the family at nearly four years old; another struggled for years with reading comprehension. Though it's impossible to know exactly what caused these problems, Carlston is convinced the TV watching didn't help. "Independent of the content, the flashing of the screen is not good," he says.

During those early years, the family had what Carlston calls an "idyllic" lifestyle, collecting mushrooms and flowers and playing on the ranch. Then a yearlong visit from cousins armed with video games "burst their bubble," he says. "We had kids who were curious about the world, and contented. They used to argue about whether the Mariposa lilies came out 10 days earlier than last year. After that, they complained about being bored and went straight to R-rated movies. It was a tremendous loss."

Even Gary Small isn't nearly as sanguine about the effects of computers as Marissa Mayer made him out to be. Small, whose many titles include director of UCLA's Memory & Aging Research Center and author of *iBrain: Surviving the Technological Alteration of the Modern Mind*, admits that his study showed that technology may help "improve memory and cognition." But years of personal observation have convinced him that those benefits come with a big drawback, especially in young people—namely, that the warp speed of technology "gives a staccato quality to our thinking processes," he says, and impinges on creativity and social connectedness. "The brains of the younger generation are digitally hardwired from toddlerhood," he writes in *iBrain*, "often at the expense of neural circuitry that controls one-on-one people skills."

For sure, one can poke some pretty good holes in the Waldorf world, not least of which is the concern that without early computer training, kids simply won't be prepared for high-tech, 21st-century jobs. But that doesn't seem to bother the school's high-tech parents. Frank Anderson, a Greenwood dad, notes that he didn't specialize in computers when he graduated from college or when he worked for the international accounting firm Arthur Andersen in the early '90s. Yet at the age of 34, he founded a high-tech startup, Blingo, that he later sold to Publisher's Clearing House. "I learned it as an adult! Imagine that!" he says. "We had classes, and it was not that big of a deal."

Brad Wurtz, another Silicon Valley veteran, even argues that Waldorf is the best kind of training for the tech world. A former Cisco executive, he's now CEO of an energy-management company called Power Assure, and he has three kids in Waldorf schools. "What's valued in Silicon Valley is not just the ability to write code," he says. "What matters is creativity and the ability to communicate effectively with a team, and it's getting harder and harder to find people who are able to do that. But that's what they foster at Waldorf." East Coast Waldorf scholar Eugene Schwartz points out that Steiner himself wasn't even completely anti-technology. He was fascinated with the telegraph as a young boy, Schwartz writes, and if he "wasn't inclined to advise people to stay away from the telegraph, then why should we assume that he would be so opposed to the Internet itself?"

"The trouble is, kids aren't learning to use technology creatively," Yost says. "The technology on a laptop can create such amazing output. But when you look at the iPad and the way media is being held up to young people, it really seems to me that it's 99 percent emphasis on consumption and 1 percent emphasis on creation."

Yost recalls his own adolescence in New Jersey, when he watched enough television that he's convinced his brain never reached its full capacity. But he was also a creator, a maker of home movies, an amateur photographer. And when computers came along, he began moving pixels around, starting on Ataris in the early 1980s.

Several years later, Autodesk saw Yost's work and gave him a contract to start developing three-dimensional design software. That got Yost jazzed up; his father was an architect, and he loved the idea of helping to build and create things. But he started having qualms when companies began using 3D Studio Max to make video games. "The more it got into entertainment, the more ambivalent I became," he says. "We'd do a demo reel, and it became about more stuff getting blown up and more realistic death scenes. I couldn't take it anymore. I felt a little like Oppenheimer working on the bomb." Yost adds that he has played a video game only once in his life, and it gave him "such a feeling of ennui. That's five minutes of my life I'm not getting back."

After Yost's video game epiphany, he took some time off, then adopted Ruby, which really turned him against the product. "This child is never going to see a video game," Yost said to himself at the time. Not only were the games violent, and not only did he think the flashing images would negatively impact her brain development, but he also loathed the way women and girls were portrayed. But he knew she'd be surrounded by kids playing video games if he sent her to public school, so that's when he looked into Waldorf.

As it turns out, Yost and his wife, Sondra, had been down a similar road before. When they got together 30 years ago, Sondra's daughter, Colette, was seven, and a big question for the family was whether they would have a TV in the house. "I didn't want one around Colette, because I knew how addictive it was," Yost says. Instead of watching the Saturday-morning cartoons Yost had loved as a boy, Colette sat and drew—today, she is a successful painter. "So we have empirical proof that this works!" he says.

Yost no longer works with video games. He is now the executive vice president of a Berlin-based computer-graphics company that has developed a way to turn the Internet into a more 3-D environment. He loves the creative aspect of his job, but he regrets that the insights he had in relation to his daughter came too late for him. "Ruby once said to me, 'You probably open your laptop a hundred times a day.'" She's right, he says, and he's not particularly proud of it. "I have no skills that are not dependent on electric power. I'm totally addicted to technology. I know that if I wasn't, I could be using my time in other ways. And I want my child to learn those other ways before she decides she wants to get addicted."

Does this approach really work? If you start kids on it when they're young, will they stay "clean"? I went to the Waldorf High School of the Peninsula, in Cupertino, to find out. Interestingly, the school is located just past several Apple offices, in a building it shares with De Anza College's High Tech Center Training Unit. The students here have their own computers to use for both schoolwork and fun, but the technolust of their neighbors doesn't seem to have spilled over.

"Waldorf kids have access to all the technology, but they don't feel they need to use it," says Ondine Izuno, 15, a sophomore. "They'll go outside and ride a bike." Izuno actually left the school at the start of the year for nonacademic reasons, but after three weeks at another school, she decided to go back. "Waldorf is good because we can take our knowledge and the way of thinking we have, and when we work in technology, we can apply that," she says.

The kids are also quite aware—even a bit smug, in that charmingly teenage way—of how different they are from their non-Waldorf peers. "You actually communicate with your friends face-to-face," says Jacqueline Pintus, 15, a freshman. "You don't just chat, where you don't show any emotion."

Walter Greenleaf, 17, a sophomore, has his own YouTube channel called LieutenantFish, and he sometimes gets a projector and shows his movies at lunch. But he's wary of spending too much time on the computer. "I don't

want to be addicted to it,” he says. “You have to be alert.” Admittedly, this is a small sample, and who knows if teens would ever admit their sins to a reporter. But if my son and his friends wind up as comfortable with technology as these kids seem to be—they use it creatively but aren’t overwhelmed by it—I’ll be very happy indeed.

The contrast between what the local tech economy produces and the life the Waldorf tech parents are shaping for their children is striking. Is Silicon Valley targeting kids? You know it when you see all those twitchy games from Electronic Arts, all those iPhone farting apps, and all that time poured into FarmVille and Mafia Wars, two preposterously popular Facebook games developed by local company Zynga. The trend was abundantly clear at prominent startup guru Guy Kawasaki’s Revenue Bootcamp last year, where an audience heard from several teen techies. The takeaway, according to Greenwood father Adrian Lurssen, who attended with his tech hat on, was this: “To reach kids, you have to give them something they want and make it either free, like Facebook or Twitter, or something they can get their parents to pay for, like an iPhone or a Wii.”

Lurssen—a native of South Africa and one of the first 30 employees at Yahoo! back in the 1990s—now serves as a vice president at JD Supra, a firm that helps lawyers use social media to promote their businesses. He’s “really, really pumped” about technology, he says, but he wants to shelter his children from the more insidious aspects of the digital age. Yet he views this job as *his*, not as the role of his industry. “Who’s more dangerous, the gunmaker or the gun user?” he asks. His answer is the libertarian one: the user.

That rationale runs deep in Silicon Valley. Paul Salazar, a technology marketing consultant with two kids in Waldorf schools, compares it to how he felt when he realized that all of the carbon-saving maneuvers he tried at home were blown to smithereens when he took just one plane flight. Does that mean he shouldn’t try to save energy at home? No. Similarly, he asks, “Do I influence this movement by stepping out of it? Do we stop building cloud computing just to discourage kids from playing FarmVille? No.”

Even the Waldorf parents who do feel a keen disconnect between their livelihood and their lives still keep it pretty much to themselves. Greenwood mom Susan Gladwin has her own technology marketing consultancy, but before that, she worked several different stints at Apple. One of her jobs was to get computers into classrooms as widely as possible, even down to the prekindergarten level. Then she had children of her own and discovered Waldorf—and now she would like to see more thought go into what’s sold to kids. “I heard about some kind of robotic teddy bear that watches television with your child and offers commentary on the program, so that the child has a ‘friend’ with them,” Gladwin says. “I can’t imagine anything more sad.”

If she were asked to work on a product like that, she adds, she might speak out. But Gladwin generally doesn’t make her feelings known to her colleagues. “There are times when someone is talking about a particular television show their kids like, and I just smile and nod,” she says. “I don’t always offer that we’re not doing it with our family.”

Yost is well aware of the fatalism inherent in his and the other Waldorfers’ attitude toward their industry. “I may sound like a bit of a hypocrite,” he says, possibly overstating his sins and possibly just being more honest than most of his colleagues. “I’m a technologist. This is what I know how to do.”

Is that what it comes down to? Every parent for himself, and the hope of any industry self-control be damned? I’ve worked as a reporter in Silicon Valley long enough to know that there are no easy answers here. We’re not talking about tech as the new tobacco, after all. The high-tech Waldorfers firmly believe that, on the whole, technology is changing society for the better. Google brings you all the world’s information, Facebook connects you to your friends, Twitter helps disrupt dictatorships, and Web 2.0 brings us a digital utopia in which everyone has a place to make themselves known.

“I love Google,” says Alan Eagle, an executive speechwriter at the search giant and a parent at the Waldorf School of the Peninsula. “And I’m delighted that the products we create will be available for my kids—when they’re ready for them.”

Dan Fost’s last piece for San Francisco, “*Lords of No Rings*” (April 2008), about the San Francisco Giants, led to his new book, *Giants Past & Present*.