child games

by Tucker Coombe

ACCORDING TO THE KAISER FAMILY FOUNDATION, CHILDREN AGES EIGHT TO 18 SPEND AN AVERAGE OF MORE THAN 7.5 HOURS A DAY ENGAGED IN "E-MEDIA"– SOCIAL NETWORKING, VIDEO GAMES, VIDEO SITES, MUSIC, AND TELEVISION. CONTINUED ON NEXT PAGE

It's a snowy morning 10 days before Christmas, and a half-dozen moms have cleared time from their hectic holiday schedules for story hour at Cincinnati's Blue Manatee bookstore. Chatting with one another, they unzip toddlers from bulky jackets, pull off hats and mittens, and form a semicircle on the carpet. Preschoolers wander around the store purposefully, looking for familiar faces and finally settling into favorite chairs. Miss Gail, the reader, begins with a "Welcome Song." The mothers all know the words by heart; the children are more tentative. The story today is about a penguin, and after introducing a fuzzy puppet to the crowd, Miss Gail opens a book and begins.

Over the last two decades, children's bookstores have shown a steady decline—first after running afoul of chain stores in the 1990s, and more recently as they try to keep pace with online giants like Amazon. Lately, though, another competitor is threatening the livelihoods of businesses like the Blue Manatee, if not reading in general: entertainment media and its rising star, video games.

According to the Kaiser Family Foundation, children ages 8 to 18 spend an average of more than 7.5 hours a day engaged in "e-media"—social networking, video games, video websites, music and television. Figuring in media multitasking—playing a video game, say, on an iTouch while watching television—they are actually absorbing some 10.5 hours of media content on a daily basis. As the foundation's president and CEO points out, "The amount of time young people spend with media has grown to where it's even more than a full-time work week."

Why should parents dig to the bottom of the toy basket to pull out *The Poky Little Puppy* instead of handing over the PlayStation? According to Blue Manatee co-owner John Hutton and more than a handful of child psychologists, psychiatrists and pediatricians, the answer is simple: It may affect the kind of person your child grows up to be.

Hutton is passionate about the health effects of e-media on children and how it measures up against time spent reading. He is the father of three and a pediatrician whose area of research centers on children's literacy. "Human language actually develops through a give-and-take process," Hutton explains. When a mother says the word *elephant* to her son and points to a picture, he says, it not only develops the child's vocabulary but nurtures the parent-child relationship. "You're providing special one-on-one time," he says. "Especially in today's world, where we're all so rushed, this is incredibly important."

Dr. Pamela High, director of Developmental-Behavioral Pediatrics at Brown University's Alpert Medical School, explains it this way: "Reading is tied to the language centers in a child's developing brain. We have very good research, beginning when children are only infants, showing that the words spoken directly to a child—the give and take of daily conversations that may seem frivolous—are actually the best predictor we have of their language development later in life. In addition, good language development in preschoolers is a very good predictor of later success in school." Words spoken in the vicinity of a child—as, for example, on a television show—don't have the same impact, she says. "Also—and this is very important—reading to children motivates them so that they want to learn to read when they get older. Kids who learn that books are wonderful and contain great stories, and who come to think of reading books together with their parents as a very special time, are more likely to work to overcome any struggles they may encounter learning to read."

A BOOK PROVIDES A PLACE IN A CHILD'S MIND WHERE HE OR SHE CAN PLAY OUT A LOT OF FEELINGS AND IDEAS IN A WAY THAT'S SAFE...A LITTLE BOY CAN IMAGINE HIMSELF AS A SWASHBUCKLING PIRATE–WITHOUT NEEDING TO RUN INTO THE STREET, WAVING A SWORD

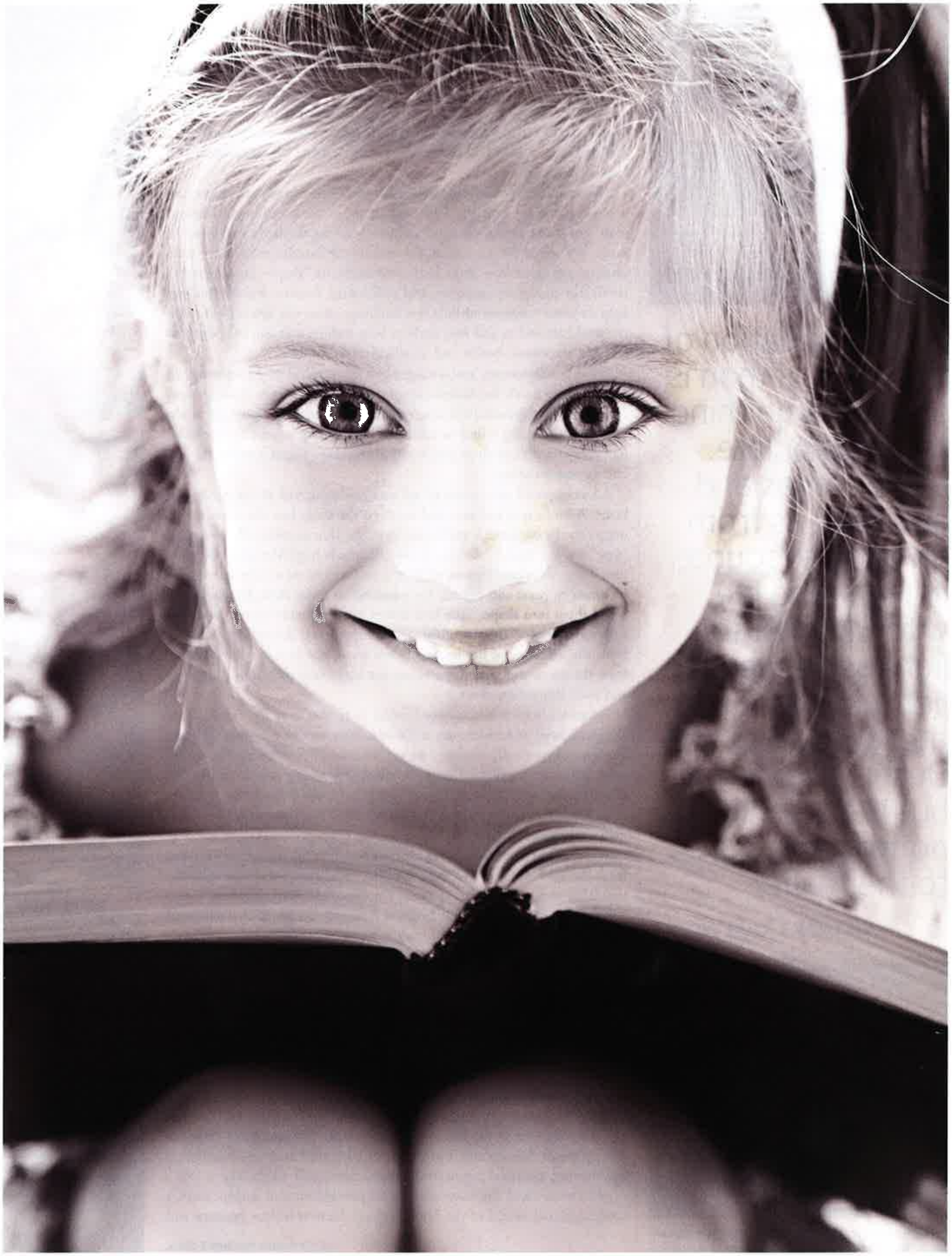
The benefits of reading at a young age go well beyond parent-child bonding and scholastic aptitude, psychiatrist Sarah Knox says. Knox specializes in working with children and adolescents. Learning to imagine, she says, goes hand in hand with learning to read. And developing the imagination helps children process complex emotions. "Think of reading," she says, "as a way to develop a child's imagination muscles. In reading a book—and here, I mean fiction—a child can identify with all kinds of different characters. She can imagine herself as a fairy princess, but also as an evil stepmother or a wicked witch. A book provides a place in a child's mind where he or she can play out a lot of feelings and ideas in a way that's safe," she explains. A little boy can imagine himself as a swashbuckling pirate—without needing to run into the street, waving a sword. "When a child is able to have a rich array of these experiences in his head—to try on the shoes, so to speak, of all these different characters—it expands his capacity to tolerate and understand his own feelings, as well as the feelings of others. Another way to think of it is that through the experience of reading, a child develops a better sense of who he is, has a chance to empathize with others and is better able to negotiate his own emotional world. And those are real strengths in life."

A book's predictable structure —beginning, middle and end—offers something else to children. "Beginning, middle, and end, if you think about it, has a lot to do with how all of us need to master relationships," she continues. "Throughout our lives, we meet people, we make connections, we form attachments. And, just as in *Charlotte's Web*, we need to deal with endings."

In Hutton's view, the finite structure of a book has another important benefit. "For a child to find out what happens at the end of a book—to get the payoff, so to speak—he needs to read it all the way through. That not only builds self-esteem—as in, 'Hey, I just finished a Harry Potter!'—but also strengthens the child's ability to sit with a task, focus on that task, and get through it."

Despite the negative press gaming often gets, the impact on children isn't all bad. Video games develop motor skills, coordination and the abilities to problem-solve and collaborate. As Sandra Calvert, professor of psychology and director of the Children's Digital Media Center at Georgetown University, explains, video games appeal to some children in ways that books don't. "Many video games are visually based, which makes them potentially very good at teaching things like spatial information, scientific concepts, or informal STEM [science, technology, engineering and mathematics] learning," she says. "Historically, we have prioritized words and language in this culture, but both are legitimate ways of thinking. Some people are dominant in terms of processing visually, so the newer technologies allow them access to information in a way that fits with the way their mind works."

CONTINUED ON PAGE 63



Child Games continued

Hal Halpin is founder of Entertainment Consumers Association, the video-game industry's retail trade association. "I think one of the things we've learned from all the research that's been done on gaming, one of the things all the scientists agree on," he says, "is that [when you're playing a game], you're activating new neural pathways and engaging the brain. You'll never hear me say, 'Games don't affect you,' because they do. It's just a question of whether the game has the appropriate content for the right person of the right age. And parents are the ones best equipped to make that determination."

Few in the field deny that violence in video games can be detrimental to a child's development. The American Academy of Pediatrics (AAP) calls exposure to e-media violence a "significant risk" to the health of children and adolescents and has linked media violence to heightened aggression, desensitization to violence, nightmares, and unfounded fears of being harmed. The American Academy of Child and Adolescent Psychiatry (AACAP), while stating that video games may promote learning and problem-solving, cautions that children exposed to violence can become "numb to the horror of violence," imitate the aggression they see, or use it to handle problems in their own lives.

Child psychiatrist Michael Brody chairs AACAP's Media Committee. "These first-person shooter games are very, very popular, and there's a lot of research to show an increase in aggressive affect, thought and behavior while a child is playing these games," he says. He adds that because most games are mobile now, parents have a harder time keeping an eye on content. Children also run the risk of meeting predatory strangers on collaborative games played over the Internet. "Beyond the violence," says Brody, "I'm concerned about the way these games displace other activities—reading, or playing with friends."

Shoot-em-up blockbusters like *Grand Theft Auto* and *Call of Duty* aren't the only e-media that parents need to watch out for. Studies have shown that infant learning videos—remember the Baby Einstein and Brainy Baby series?—actually delay language development in toddlers and babies. Evidence from this and other research led the American Academy of Pediatrics to recommend, in 1999, that children under the age of 2 should have no screen time whatsoever. For older children, the AAP suggests parents limit screen time to two hours a day.

Jane Healy is an educational psychologist and author of *Failure to Connect: How Computers Affect Our Children's Minds—And What We Can Do About It.* Healy has serious concerns about the impact of all e-media on children. There's no question, she says, that the neural connections created when kids play video games are different from those used for reading. "Basically, my concern—and others have said this as well—is that we're losing the power of reflection and the power of sustained attention," says Healy. "I would maintain that in many of the visual activities—online, on screens, on television—that it's actually the programmer's brain that's doing most of the work. The child is responding, almost like a rat running in a maze. It may look fast and it may look clever, but it's a stimulus type of response."

Playing video games, she continues, "conditions the brain to respond to something exciting, and then to look around for something else that's exciting. It's not developing very deep uses of the human mind. The ability to problem-solve on a deeper level, the ability to take someone else's point of view, to reflect on issues and topics and relationships—these are the things that I think meaningful reading encourages."

In 2009, President Obama launched the Innovate to Educate campaign. The initiative is aimed at boosting students' proficiencies in STEM subjects. One of the key elements of the program is the National STEM Video Game Challenge.

"There's some really powerful intellectual activity in the video-game community," says Kumar Garg, senior advisor at the White House Office of Science and Technology. "And we're finding this is a community that wants to make a difference." As part of this initiative, game designers have begun building educational components into popular, commercial games. "Take a game like *Spore*, which is all about making the next creature. What if *Spore* also got kids excited about learning math and science?"

The Challenge also gives kids the chance to design original games of their own. Alan Gershenfeld, president of E-Line Media and a partner in the Challenge, finds this particularly exciting. "Designing games," he says, "requires skills like systems-thinking, problem-solving, critical thinking, iterative design, creativity and collaboration—and kids love it...My belief is that if we can tap into a natural passion that kids have, we can motivate them to want to learn subjects like math and science."

Roger Altizer is a video-game advocate and a professor at the University of Utah. He thinks any risk video games might pose are far outweighed by the learning opportunities. At the most basic level, he says, a game is simply a logic problem—not unlike a word problem one would encounter in math class—with the capacity to stimulate the imagination.

"You know that expression, *get lost in a book*? Well, kids get lost in video games," he says. "Because these games provide rich, exciting experiences. Kids create new rules for playing, they extend the storylines of games after they've finished playing, they even write their own stories about the games' characters.

"There's a concern that's been around a long time about the effects of video games on children," Altizer continues. "Are there good things that come out of media consumption, particularly interactive entertainment and video games? I think the answer is yes, and I think it's a question that's only just being asked. When Gutenberg invented the printing press, there were all sorts of questions about who should and who shouldn't be reading. 'Should women read? Should children be allowed to read?' I guarantee there were people who said, 'Reading is very bad for children. They won't learn to be productive members of society because if they're reading, they're not working!' Today, you have a new medium: video games. They've only been around for about 30 years, and we are having that same conversation."

With the rising popularity of gaming and e-media showing no end, the question for parents becomes how to guide your child through it. Donald Shifrin is a pediatrician in Bellevue, Washington, and a member of the AAP's Council on Communications and Media. "The difficulty we're facing now is that we're really in the beginning stages of a new paradigm. Is access to all this electronic media a good or bad thing? We can't say. We can just say that it's here, and it's going to accelerate. One problem is that these devices are so immersive that youngsters become tethered to them and find it hard to give them up. Teens and their phones are a prime example.

"I'm concerned," he continues, "when I see a 1-year-old child coming in for a doctor's appointment and when the child cries, his parent pulls out the iPhone to show him a video. I'm a bit worried these devices could become a default mechanism for pacifying youngsters. And recent research shows us that young children learn far better from a real, live person than from electronic devices."

In the end, Hutton says, the conundrum rests more with parents than children. "The whole process of sitting down to read a book with a child takes time, it takes effort, it's not glamorous—and increasingly, this sort of experience is outsourced to electronic gadgets. I do worry about the push to make kids do too much, too fast, and to be 'smarter.' The kids may be learning to push buttons, but some of the really important [benefits] one gets from reading—language, empathy, emotions—are perhaps being neglected." B