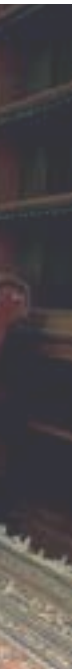
Research shows that our biological inclination to **let loose** helps us deal with life's challenges, **innovate**, think more creatively—and, of course, it's just plain **fun**.

By Mark Anderson



He didn't want to fight, but all the other kids on the playground had already made up their minds. If 9-year-old Kevin Carroll was going to continue using this Philadelphia city park, he would need to go toe-to-toe with the new kid. So he did.

Like wolf pups in a TV nature documentary—half horsing around and half holding their place in the pecking order—Carroll and the new kid rolled around in the dirt and faked some punches. The fight was convincing enough that none of the other kids could say Carroll wasn't trying. But neither child was exactly crying or bleeding, either. Everyone else on the playground soon got bored and moved on to something else.

Meanwhile, Carroll and the new kid found that they were having a blast.

"You wanna come to my house for a peanut butter and jelly sandwich?" the new kid asked Carroll as they each dusted themselves off.

Carroll—now 52 and an acclaimed author and motivational speaker as well as a former trainer for the Philadelphia 76ers—had had what he calls a "red rubber ball moment." Carroll had discovered how play can transform even tense, high-stakes moments into pure fun and form deep connections that can last a lifetime.

Not only did Carroll become lifelong friends with the new kid, Norman Lane (who tragically died in a car accident at age 26), but he also was all but adopted by his new friend's family. "Forty-three years I've known the Lanes," Carroll says today. "I still have a key to their back door."

Carroll is one of a growing number of evangelists for play. But not just play in the dictionary sense. (As San Francisco psychiatrist Lenore Terr points out, some dictionary definitions tag play as something children do.) But also in the sense of anyone at any age tapping into that same childlike sense of wonder and playfulness, whether it's in sports, in the workplace, in a hobby, in the kitchen or even just playing with one's own kids.

Stuart Brown, a medical doctor, psychiatrist and founder of the Carmel Valley, California-based National Institute for Play, says not only can play be beneficial, it's actually essential: "Humans are designed by biology to play throughout their entire life cycle," he says. "For a lot of animals . . . play pretty much disappears [when they're grown]. For humans, it doesn't. It changes. The drive for it is less in adulthood. But it's still there."

Vacations, sports, resorts, hobbyist clubs and organizations—and indeed much of the world of arts and creativity—all attest to the human need for play. And Brown says brain

research suggests this state of mind is as deeply seated as it is often profoundly felt.

Play, he says, "is not cognitive, linear thinking. And it's not sleep and dreams. But it's kind of the bridge between those. And it emanates from deep centers in the brain that are largely about feeling and survival."

For instance, Brown points to a landmark study by the Canadian neuroscientist Sergio Pellis, who examined rats, usually a playful species. However, Pellis' team raised a cohort of rats who were systematically denied play from birth onward. The scientists then set a used cat collar in the rats' cages. Hard-wired to flee at the scent of a cat, the play-deprived rats ran for shelter—as did a control group of rats who were not denied play.

But after the initial moment of flight, the play-deprived rats fared worse and worse. "Their stress levels stay up higher," Brown says. "Their ability . . . to begin to survive through foraging and getting food is greatly limited as compared to those rats who've had normal rough-and-tumble play, whose stress levels go down quicker. And they go out and enter the hazard-laden world."

Play, in other words, seems to help the brain adapt and improvise when unexpected challenges arise.

This conclusion is borne out over 40 years of research and field work, during which Brown has conducted what he calls "play histories" of 6,000 people, from Nobel laureates to hardened criminals. Some of the highest achievers in business, science and the arts, Brown finds, have some of the richest histories of play throughout their lives. "Either through their parents or through their own initiative, many successful people have maintained a common thread between early natural play tendencies and what they do in their adult lives," Brown says. "For some, the work-play separation is virtually nonexistent."

The other end of the spectrum is perhaps just as instructive. The first play history Brown took, in fact, was a posthumous investigation into the life of Charles Whitman, an architectural engineering student at the University of Texas in Austin who on August 1, 1966, went on a horrific campus shooting rampage that killed 17 and wounded 31 before police gunned Whitman down.

Reporting to Texas Governor John Connally, Brown noted that Whitman had evidently never experienced unfettered childlike play during his life. A superachiever who was the youngest Eagle Scout in the history of the Boy Scouts, Whitman was also as a youth denied every opportunity to horse around with his friends. Whitman's father scorned play, saying his boy should instead be doing something "useful."

"When he was unable to handle his aggressive and hostile impulses when humiliated and stressed, he became preoccupied with violence," Brown says. "He killed his wife and mother and all those people, with the façade of being Mr. Nice Guy, normal, Eagle Scout, good B-student and so on." Of course, Whitman's case is the far extreme of what Brown calls "play deprivation." Nevertheless, denying normal impulses to play in less extreme ways still has consequences for a person's mental well-being.

In his 2009 book *Play: How It Shapes the Brain, Opens the Imagination, and Invigorates the Soul*, Brown disputes a related common misperception. "The opposite of play is not work," he writes. "The opposite of play is depression."

"A lot of the outcomes of a seriously play-deprived life are to have a kind of rigid and hopeless, driven way of looking at the world," Brown says. "Your life is driven by security and responsibility . . . or [the belief] that every moment needs to be productive with a specific outcome. And yet the paradox of being human is that we become more responsible, more empathic, more productive by honoring our play nature."

So what is play? Terr, author of *Beyond Love and Work: Why Adults Need to Play*, calls it "activity aimed at having fun." Brown, on the other hand,

> I have one **'look up'** day per week. I spend more time looking up than looking down. It allows me to see **new things** from new eyes."
>
> —Kevin Carroll

PHOTOS: PAGE 72: KIDS: CLOCKWISE FROM TOP LEFT: BRAND NEW IMAGES; CHRIS TED; MARK MANN; ALEXANDRA GRABLEWSKI; ROBERT DALY; TAY REES; FUSE KING; CUT OUT PHOTOGRAPHY: PAUL NAJLIS. THIS PAGE: SWANSON STUDIO (KEVIN CARROLL).

says he's seen it in too many different forms to be able to provide a universal definition. Rather, he highlights key properties: Play is something done for its own sake; it's voluntary; there's an inherent attraction to it; the player experiences a kind of freedom from time and perhaps loses track of his or her own self; it's open to improvisation; and finishing it leaves one wanting to do more.

every person, of course, has his or her own favorite forms of play. To find it for yourself, Brown says, think back to a moment of pure, childlike joy or pleasure as a youth. Perhaps it was a first bicycle or a birthday party or a family outing or vacation. Now, Brown says, "Whether you've got three kids and a tough job with a lousy boss or financial strain—ask yourself: How can I now find someplace in my existence to experience those feelings again?"

The answer might be in sports or taking up an instrument or joining a book club or writers' group. Maybe it's as simple as trying out new recipes at dinner or building that model airplane you never got to make as a kid.

For Carroll, getting to the root of play means reawakening that childlike sense of seemingly endless curiosity. Adults, he points out, often go through their days looking down, often these days at a screen. Whereas kids, he says, are more often looking up. "They're always trying to bring new things into their imagination," he says. "I have one 'look up' day per week. I spend more time looking up than looking down. It allows me to see new things from new eyes."

Carroll, who has spoken to crowds of school kids, Fortune 500 executives and United Nations dignitaries, sees play as essential in the workplace. It can sometimes be sparked by the simplest object. "We all speak ball," Carroll says. "When you bring a ball with you somewhere, people want to know, What are you going to do with that? It's a magnet."

Carroll's "red rubber ball" series of books—*Rules of the Red Rubber Ball* (2005), *What's Your Red Rubber Ball?* (2008) and *The Red Rubber Ball at Work* (2008)—uses this centerpiece of sports as a metaphor for rediscovering and exercising the muscles of creativity everyone had as a kid. "I always tell people, play is serious business—and play *is* serious in business," Carroll says.

In *Red Rubber Ball at Work*, Carroll highlights the stories of 33 businesspeople, artists, writers, doctors, researchers and philanthropists who all have incorporated play into their worlds of work, with often life-altering and career-changing results.

"Think back to your childhood," Carroll writes. "Activities we called soccer, tap dancing, marbles, double-dutch, blocks and tag were also exercises in resourcefulness, planning, strategy, design, decision-making, creativity and risk-taking."

As *Red Rubber Ball at Work* reveals, keeping a playful mindset in the workplace—and discovering inroads to adapting favorite forms of play from childhood—can indeed yield significant results.

For instance, a boy growing up in the Bronx built entire worlds around his train set, while a girl growing up on her grandparents' Mississippi farm crafted whole cities out of the sand and dirt found in abundance behind her grandparents' barn. That boy, Carroll's book reveals, is Larry Rosenstock, CEO of San Diego's High Tech High, a world-renowned hybrid academic-vocational high school that the boyhood model-train enthusiast founded to fuse his love of technology with his passion for imagination. That girl is Ann Willoughby, founder and president of the Willoughby Design Group, a firm that builds products and brands around, as their website puts it, "emotionally centered, visual storytelling that leaves lasting impressions."

Another girl loved to stage imaginary theatrical productions during her youth, while still another enjoyed pretending to be both a teacher and librarian to her younger brother. The former is Ivy Ross, today executive vice president of marketing for

Stuart Brown, founder of the National Institute for Play, says denying our need to play can have negative effects on our emotional well-being.

Additional Photography Credits //

Page 44-45 //
Page 44: Courtesy Museum of Fine Arts, Boston (Marjorie Merriweather Post brooch); Danny Clinch (McGraw); Axel Heimken/dapd (Sade); NBC/NBCU Photo Bank via AP Images (Bareilles); Courtesy Trump Ocean Club International Hotel and Tower Panama (Trump Ocean Club International Hotel and Tower). Page 45: A. Ko © SDCC (Artists' Alley at Comic-Con 2010); Peter Stigter (Amsterdam Fashion Week); The Art of Living Foundation (World Culture Festival); Courtesy Copenhagen Jazz Festival (Hancock).

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Photos: AP Photo/Karen Wilson (ASP World Masters), AP Photo/Charles Sykes (Carell), Rob Shanahan (Yes); Tom Sheehan (Coldplay); Courtesy of American Black Film Festival (American Black Film Festival); Brian Stanton (Midsummer Night Swing); Stephane Cardinale/People Avenue/Corbis (Paris Fashion); Chris Christodoulou (BBC Proms).

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Clockwise from top left: (Saugatuck dock) Erin Wilkinson; (Saugatuck signs) Felicia Fairchild/Saugatuck/Douglas Convention and Visitors Bureau; (St. Simons beach) Chris M. Rogers; (Colorado kayak) Matt Inden/Weaver Multimedia Group; (Colorado mountain) Denise Chambers/Weaver Multimedia Group; (Nantucket harbor) nantucketislandresorts.com; (San Juan Island child, pie, The Island Inn at 123 West, dining on lawn) Charity Burggraaf; (biking in St. Simons) Chris M. Rogers.

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Row 1: Gonzalo Barandiarán, PromPerú (surfing); Michael Tweddle, PromPerú (Paragliding); Jorge Zegarra (Mesa 18 & Ayahuasca Restobar). Row 2: Enrique Castro-Mendívil, PromPerú (Surquillo Market); Nicholas Gill (Madam Tusan & Huaringas). Row 3: Park Roberto Baratti (Miraflores Park); Jorge Zegarra (Picas & Galeria Lucia de la Puente). Row 4: Jorge Zegarra (Museo Amano); Nicholas Gill (The Barrio Chino), Magalí Del Solar, PromPerú (Convento de San Francisco); Raúl García, PromPerú (Huaca Pucllana). Row 5: Andrés Mercado, www.enlima.com (Second Home Peru); Jorge Zegarra (Mercado Indio); Nicholas Gill (El Mercado); Mayu Mohanna, PromPerú (Magic Circuit of Water); Gihan Tubbeh, PromPerú (Street Anticuchos).

Gap. ("The ability to paint mental pictures helps me make connections and serve up ideas to consumers in a way that is fun and makes money," says Ross.) The latter is Irene Au, director of user experience at Google. ("In the creative process, it is important to build on top of ideas rather than shutting them down. That is something kids do naturally," Au says.)

Examining play throughout the entire animal kingdom, behavioral psychologist Gordon Burghardt of the University of Tennessee at Knoxville has discovered and cataloged the entire spectrum of play. From young peregrine falcons passing ivy stems in midair like Quidditch players from the Harry Potter books to Cuban crocodiles batting balls around like reptilian water polo enthusiasts, play is just part of our heritage as members of the animal kingdom, Burghardt says.

In his book *The Genesis of Animal Play* (2005), Burghardt quotes pioneering American psychologist G. Stanley Hall: "Play is motor poetry," Hall said. And while different animals play for different reasons—some as rehearsal, some as brain development, some as just plain fun—Burghardt says he agrees with Hall's overall observation, to a point.

"I have clips of a crocodile playing with a tetherball," Burghardt says. "Would you call that poetry in motion?" Brown says animals can themselves be a gateway to human play: "How many people can withstand a young Labrador puppy getting all over them, licking, running around, chasing? That's contagious play," he says.

"It's there in us," Brown continues. "So retrieving it—and then acting on it and prioritizing it—is an important part of being an emotionally mature, healthy, competent, whole human being."

Or as that kid on the playground would say: Tag! You're it! //