Tuned into Creativity, Collaboration Is Key
Melding research in education, psychology, and business, Associate Professor Keith Sawyer explains "that all creativity, even seemingly solitary artistic pursuits, involves improvisation, collaboration, and communication."

BY JUDY H. WATTS

Imagine the action in a recent New Yorker cartoon: A solitary man is working feverishly at his office desk, which sits on a conveyor belt that is moving inexorably toward a colossal wringer whose rollers are studded with spikes. Above the device is one word: DEADLINE. This exaggeration of the familiar obviously amused the publication’s editors in Times Square—and by extension, its million-plus readers nationwide. Most of the magazine’s readers are professionals who, despite the mild anxiety attached to producing under pressure, probably would insist they do their best work on deadline.

Unfortunately, people do not actually perform at their best that way, although many of us feel as though we do, says R. Keith Sawyer, who is associate professor of education and of psychology in Arts & Sciences, and of business at the Olin Business School; an expert on the learning sciences; and a leading researcher on the science of creativity. Sawyer has published 10 books and more than 50 scholarly articles, has two books in progress, nine articles in press, and has lectured worldwide and been an invited keynote speaker many times over. In spring 2008, he will be a keynote at the School of Law’s intellectual property conference.

Of tight time limits, this prodigious multitasker says simply: “They’re bad for creativity.” Although killer deadlines and long hours are a semiformal part of many companies’ philosophy, Sawyer writes in Group Genius (Basic Books, 2007) that research shows that far fewer insightful ideas occur under high pressure, and that “creativity remain[s] depressed for at least two days” afterward. Creativity—which may be very loosely defined as the generation of novel and socially valued ideas or work—occurs in stages. First, we encounter and internalize numerous flashes of insight; after that, incubation time off-task is essential for those mental sparks to combine in original ways.

While extrinsic motivators, which may range from hopes for favorable performance reviews to fears of being fired, are powerful incentives that do get the job done, the results simply do not approach the innovation achieved in a diametrically different, highly collaborative environment. Sawyer suggests that companies destined to inherit the future should “ditch the organization chart” and instead implement loosely coupled, autonomous building blocks of
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people from diverse backgrounds who can be brought together or regrouped without expensive, wrenching corporate reorganization. This kind of culture—the polar opposite of bureaucratic "group think"—seems unnatural and unplanned to many managers, he says, but in the 21st-century's rapidly changing economy, "new technologies are opening up formerly stable industries to radical new competition."

Group Genius is packed with important implications of creativity research for individuals, organizations, the Web, intellectual property, the economy, and much more. One chapter, "Group Flow," describes the psychological concept of flow—the state of peak experience a person enters when his or her skills match the challenges of the task. "It's an incredibly motivating state—it's peak experience," Sawyer says. "Groups enter a similar state, when the dynamic is flowing naturally and everyone performs at a higher level."

Another book, Explaining Creativity: The Science of Human Innovation (Oxford University Press, 2006), parses the complex phenomenon of creativity through a sociocultural approach to visual and oral expression, writing, music, acting, science, and business. A unifying idea in this formidably researched book—which debunks society's closely held myths—is that all creativity, even seemingly solitary artistic pursuits, involves improvisation, collaboration, and communication.

A career built on interactions, sparks, riffs, and progressions

Sawyer experienced creative interaction firsthand when he and three other members of his high school jazz band in Newport News, Virginia, started a four-piece jazz group, Tangent. He was exhilarated and fascinated by the phenomenon of people creating music in response to what others were doing and generating something better than they could have done alone—and that they could not have foreseen when they began.

Like an improvisational performance involving innumerable interactions, sparks, riffs, and progressions, Sawyer's professional career emerged—and continues to develop—in unexpected ways. Adds William Tate, the Edward Mallinckrodt Distinguished University Professor in Arts & Sciences and chair of the Department of Education: "Keith Sawyer has contributed to the scholarly knowledge base in the area of creativity and learning while simultaneously generating great interest from both research colleagues and leaders in business, science, and government. He is one of a very few scholars who work across fields—sociology, psychology, and education—while staying focused on the same research problem."

After graduating from the Massachusetts Institute of Technology with a degree in computer science, Sawyer worked as a videogame designer for Atari and then as a corporate consultant. During that time he became interested in studying conversational dynamics and how what one person says sparks another's response. He chose the University of Chicago for graduate school because of its faculty strength in that area, and as part of a human development program there, he visited a preschool classroom. Immediately fascinated with the children's improvisational conversations, he obtained permission to tape the richly imaginative exchanges. "I was surprised when that work gradually emerged as my dissertation topic!" It became the basis for his first book, Pretend Play as Improvisation (Lawrence Erlbaum, 1997).

During those graduate years in Chicago, which is the national center of improvisational theater, Sawyer played jazz piano with improv theater groups on weekends. (His style, sometimes called "hard bop," is similar to that of his favorite jazz pianist, McCoy Tyner, who was part of John Coltrane's legendary quartet. "I like the style's extreme improvisationality; it's particularly collaborative and egalitarian.") Sawyer videotaped 15 improv groups during
Creativity Myths (and the Realities)

In his book *Creative Genius*, Keith Sawyer discusses in detail the creativity myths society holds dear. Here are some of those myths, followed by highly condensed facts, in Sawyer’s own words:

- Creativity comes from the unconscious. ("It is mostly conscious, hard work.")
- Children are more creative than adults. ("Children aren’t as creative as we think they are." Creativity is a "long and difficult path").
- Creativity represents the individual’s inner spirit. (The works represent “the characteristic markers of our culture and time period.”)
- Creativity is spontaneous inspiration. ("Formal training and conscious deliberation are essential.")
- Creativity is the same thing as originality. ("All creativity includes elements of imitation and tradition. There is no such thing as a completely novel work.")
- Fine art is more creative than craft. ("Our culture is biased toward creative products that have no function other than pleasure. But this division is culturally and historically relative.”)

Innovation as key to learning, to society’s future

The editor of the first handbook in the learning sciences, the *Cambridge Handbook of the Learning Sciences* (Cambridge University Press, 2006), Sawyer says that for the 21st century, the nation urgently needs graduates capable of innovation. “Soon any job that doesn’t involve creativity will be automated or outsourced to a lower-wage country. All the high-wage, high-status jobs will be creative, yet many students aren’t getting what they need because of some of the fundamental features of schools and classrooms today. We now know that memorizing and regurgitating facts yields very superficial knowledge—whereas creative performance is based on deep conceptual understanding.” In his own classes, Sawyer creates rich learning experiences, in part through group projects involving autonomous, independent work.

Sawyer also is hard at work on what promises to be a visionary book: *The Future of Schooiling*. The enormous and urgently needed project will combine research on the science of learning with his research on creativity and innovation as it relates to today’s economy and society.

At home, Sawyer and his wife, Barb, a language translator and the person to whom *Group Genius* is dedicated, have collaborated on a flexible, fun, and intrinsically motivating home environment, replete with highly creative cuisine. Their 4-year-old son, Graham, is thriving: “Ever since he was about 2, Graham has loved playing the piano with me,” Keith Sawyer says. “He loves music and always sings along—and he has been particularly drawn to jigsaw puzzles since an early age.”

For all the rest of us who would like to become more creative, Sawyer provides abundant advice in the final chapter of *Explaining Creativity*. Among his recommendations are to choose a domain we unequivocally enjoy, to work extremely hard, to multitask, to take time off—and to “seek an environment that supports creative thinking.”

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