

# A Creative Dialog

**Two of the world's leading experts on creativity, Mihaly Csikszentmihalyi and Robert Epstein, debate the myths that surround this mysterious process. Do we all have the ability—or is it reserved for only the few?**

**W**YOMING is not only the birthplace of Jackson Pollock, master of squiggly art. It's also the home of Casper College, host to a remarkable humanities festival that annually draws top scholars and scientists. This year the Casperians took a careful look at that mysterious domain that Pollock had mastered as few others have: creativity. For three days, distinguished poets, artists, writers, composers and scientists from around the country presented their varied perspectives on the creative process, all before a stage set for Shakespeare's *The Tempest* (the play was being performed each evening in the same auditorium).

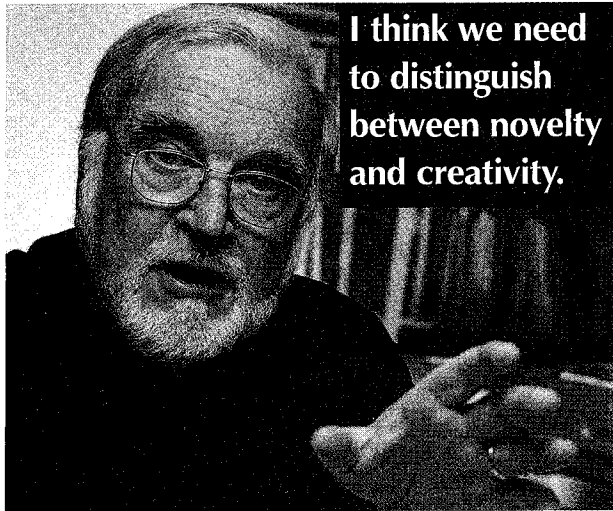
The climax of the festival was a panel discussion, where, to the delight of the audience, the two psychologists on the panel began an impromptu and impassioned debate, one arguing that creativity can and should be taught, the other insisting that cultures can tolerate only a handful of creative people in each generation.

Who's right? And, perhaps just as important, who do you hope is right?

A creativity researcher for more than 30 years, Mihaly Csikszentmihalyi (pronounced Me-high Chick-zhent-me-high) is Professor of Human Development and Education in the Department of Psychology at the University of Chicago. He has written 13 books, including the best-seller *Flow: The Psychology of Optimal Experience* (Harper Collins, 1991). Robert Epstein is University Professor at United States International University in San Diego. His books include *Creativity Games for Trainers* (McGraw-Hill, 1996) and *The New Psychology Today Reader* (Kendall/Hunt, 1999), and he is a contributor to the newly released *Encyclopedia of Creativity* (Academic Press, 1999). Here are highlights of their debate.

**MC:** Do all innovations become integrated into a culture? A lot of new ideas are generated in a given culture, but are they all selected and transmitted? That's where I disagree with you, Robert. I think we need to distinguish between novelty and creativity.

You study novelty, and it's true that that's the ground from which creativity



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flows, but it's not enough. Novelty in human behavior is like variation in evolution. Thousands of mutations are necessary for evolution, but then those mutations come under strong selection pressure, and only a few survive. Three stages are necessary for evolution: variation, selection and transmission.

You emphasize the first of these stages, but I don't think it's enough for creativity.

**RE:** I've been looking forward to this moment for several days.... [Laughter from audience.] While it's true that biological evolution requires several mechanisms, selection is a trivial one, at least in the sense that it's not mysterious. Variation has long been the mysterious mechanism, since it's the mechanism that generates novel forms, and until recently, we had no idea where such forms came from.

The same is true of creativity. It's the novelty in the behavior of the individual—the flash of insight or solution to a nagging problem—that has always made creativity seem so mysterious to people. That's the phenomenon that feels so bizarre, that seems so divine, and that's where I've been trying to remove the mystery. Once something new is presented to a community—say, a new painting—the selection process is almost arbitrary. A painting that one community hates might be adored by another community. That's why I think selection is trivial.

**MC:** One of the typical moves in academic dialog is to say that the other person's interest is the trivial part of the problem.... [Laughter from audience.]

To me, selection is the real mystery. Under what conditions are people receptive to and able to recognize novelty? Novelty, on the other hand, is not mysterious. You yourself are trying, through your research, to show that novelty is not mysterious, and I agree. But without selection, you cannot have evolution, and you cannot have art.

**RE:** I don't think that the way a culture judges a creative product is especially trustworthy. Imagine Albert Einstein emerging from the patent office in 1905, carrying his three brilliant manuscripts, only to find that someone else had already proposed his ideas the year before. Would his accomplishment have been any less amazing, even if the culture chose to ignore him?

And what about the many innovative artists and scientists whose ideas were rejected by the experts of their day—Copernicus, Galileo, and even Darwin himself? The idea that continents shift around the planet on vast plates was considered preposterous for decades, but now we know it's true. It's originality in the individual that we need to understand and nurture. To hell with the fickle judgment of the culture.

**MC:** But here's the problem. I've worked with hundreds of people over the years who thought they were as creative as Einstein. It turned out they were delusional, and it took years of therapy to correct the delusions.

It's impossible to judge what happens in the mind of the individual scientist as being novel or great. In fact, I don't even know if Einstein's ideas were so great. I have to rely on what other physicists say about him, because I don't understand his ideas. Without such an evaluation, I might conclude that Einstein was just as delusional as those hundreds of others I've worked with. The judgment of others is essential for us to be able to call an idea creative, to distinguish it from delusion.

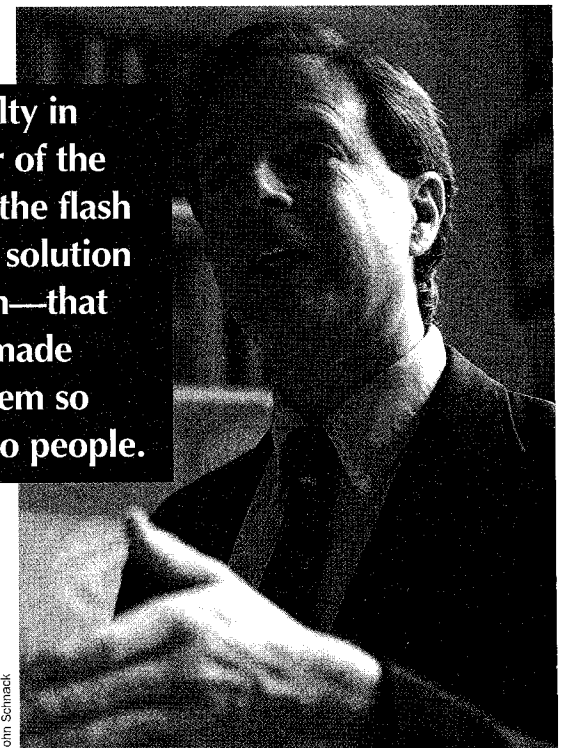
**RE:** But when it comes to creativity, isn't delusion relative?

**MC:** Sure, and that's why you need the judgment of a community, because the judgment is made relative to a standard, and you have to know what the standard is.

**RE:** I guess I'm less confident than you are about the validity of that judgment, knowing how often those judgments change, and how often they fail.

**RE:** I don't think that insight is fundamentally different from other, more awkward kinds of problem solving. When the conditions are just right—in experiments with both pigeons and

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John Schmack

people—solutions emerge in that spectacular way we call insightful: there's a period of quiescence, followed by the sudden onset of the full-blown solution—pow! If I change the conditions slightly, or if I alter the organism's learning history, I can engineer a sloppy, trial-and-error solution to the same problem, and I can even engineer a failure.

The creative process is lawful, and we're discovering what the laws are that govern this process. The same laws seem to govern a wide range of creative performances. Only the parameters are different.

**MC:** Well, I'm not an expert in pigeons [laughter from audience], but in people I can tell you that the "pow" experience is important but not the whole process. Successful problem solving often requires many replays of the same sequence, and it depends on the type of problem the person is grappling with and on the kinds of skills he or she brings to the problem.

Problem solving is rarely clear-cut. In fact, the interesting thing about creativity

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is that there is often no problem there to begin with. You have to formulate the problem, and only then can you try to solve it. This can take a long time.

The aha experience can be very misleading. We have aha experiences all the time, and then 10 minutes later we realize our idea was worthless. We need to engage in constant evaluation in order to determine whether our idea was a will-o'-the-wisp or whether it had real substance. You're lucky if you can throw a bad idea away immediately. Some of the most creative people I've interviewed say that the reason they are creative is that they can throw away the bad ideas much quicker than other people can.

**RE:** We know now how to train creativity, and I think we should be providing every child with the skills he or she needs to express creativity throughout his or her life. We give all of our children basic basketball skills. Why not give them basic creativity skills? I think novel behavior in and of itself has value, even if people are just reinventing wheels. Let's give every child the skills he or she needs to reinvent the wheel. If we could tap that kind of potential, with nearly everyone generating art, science and invention, think of the enormous pool of novelty that would be available to us.

The business community knows how important it is to have an enormous pool of ideas to choose from. Supposedly, only one in 10,000 ideas that are generated in business is good enough to make it to market. Let's give our children the skills they need to ex-

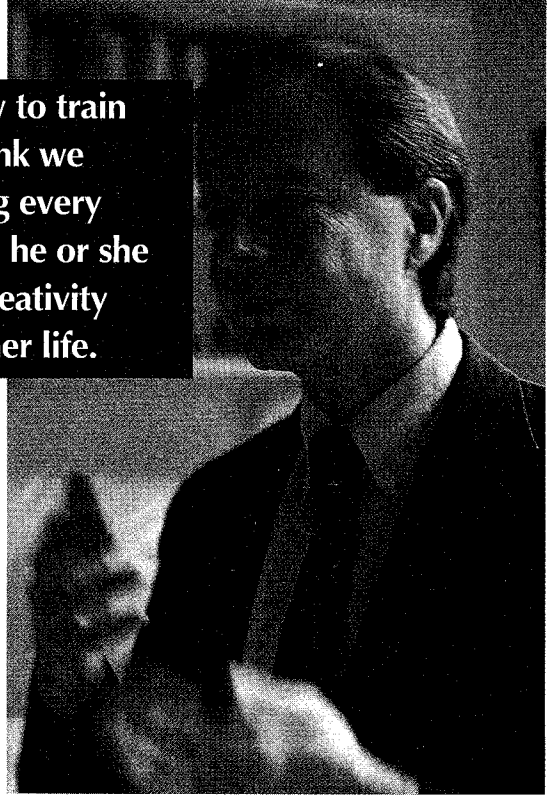
press their creativity daily, both in the workplace and at home.

**MC:** I think we do a disservice to children and to parents by using the word creativity to describe the individual's need to express himself and to explore the environment. If we use that word, we give children the expectation that their novel ideas are going to be rewarded in some way. If all sixth-graders invented wheels, we would be run over. We don't have space for that many wheels.

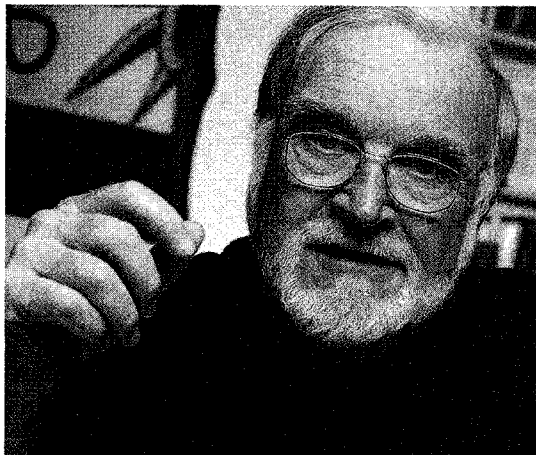
Reality puts boundaries on what is needed and what is useful. When you take a big corporation like Motorola and try to make their 25,000 engineers more creative, what happens? Nothing, because there are no selection mechanisms in place. You get lots of new ideas, but no one knows which are good and which are bad, and you have far more ideas than you can ever implement. Ultimately, you're just alienating a lot of people whose new ideas are not realizable.

So I think we need to distinguish between what I call creativity with a small "c"—creativity that serves your own personal satisfaction and fulfillment—and what I call creativity with a capital "C," which implies some sort of acceptance.

**RE:** Again, it supposedly takes 10,000 ideas in business for one good one to emerge. That's what *Fortune* magazine



John Schmeck



Kevin Banna

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says, and I suspect that that estimate is low. So if you get two ideas from each of your 25,000 employees, that gives you only five good ideas to work with. If a company lacks the mechanisms it needs to review the flow of new ideas, that's just another problem to be solved.

As for our children, I don't want even one child to be deprived of the skills he or she needs to express creativity optimally throughout life. If that means there's going to be a glut of new ideas out there, so be it. I think that's a wonderful problem for society to have. Fortunately, we have a new means of expression—the Internet—that will allow ideas to be expressed and evaluated at thousands of times the rate than has ever been possible before.

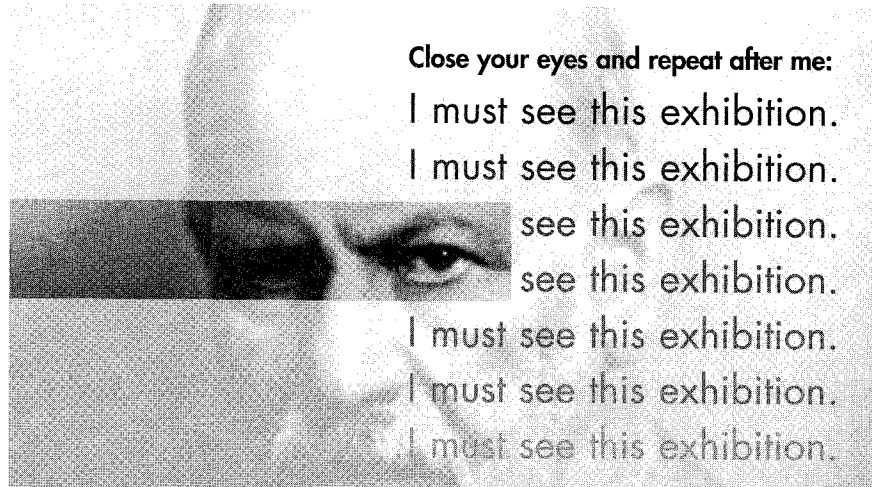
**MC:** I've heard the hype about the Internet, but I'm still waiting for the first example of a useful application. What is personally generative is rarely creative. Flow, which is the subjective feeling we have when we perform at our best, is what makes life worth living. Yet it does not necessarily translate into a creative accomplishment. I like to keep clear the distinction between what is good for the person and what is good for the culture.

**RE:** As far as I know, only history can make that kind of distinction. Let's give history a vast array of material to choose from, rather than leaving creativity in the hands of an elite minority. Virtually anyone can learn the skills he or she needs to express a high degree of creativity. Let's create a world in which creativity doesn't just flow, but overflows.

**MC:** As you point out, history will have to choose. So what I am trying to say is that if we want to understand creativity, we need to understand the process of choice. Who is entitled to make it? On what grounds? How can we enhance creativity by improving the way we select and implement new ideas? If we don't worry about these questions, the overflow will just make a big puddle.

**RE:** Well, I guess I'll let you have the last word on this, even though you're wrong. [Laughter from audience.]

**MC:** Thanks! ■



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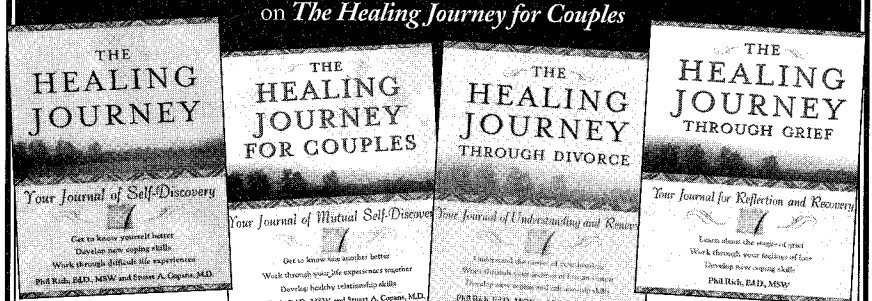
Sigmund Freud, 1921. Photo by Max Halberstadt.  
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