Change is coming at warp speed these days. These Badger futurists help us make the leap.

By Niki Denison
western Mutual. Meanwhile, he enjoyed a chance invitation to speak at a Rotary Club so much that he continued speaking as a hobby, eventually realizing that he might be able to make a living at it. He left Northwestern in 1987 to go full time on the speaker’s circuit and has not looked back. “I get to learn about everything in my job, so that’s kind of the glorious thing about it,” he says. “I tell people that what I really do for a living is sit around and read books. I get to indulge my curiosity on topics ranging from health care to microchips. ‘It doesn’t seem like work.’” He reads a lot online, and “I probably spend a good two hours a day reading editorials, articles, and various blogs,” he says. He subscribes to, among other things, Fast Company, Wired, National Geographic Traveler, Macworld, Gilbert Magazine, Dwell, and Popular Science “because it’s so much fun. ... I don’t subscribe to any newspapers, because I think that in many ways they are so outdated, so antiquated.”

Prior to September 11, Zach had four employees who helped manage his calendar, travel, and graphics for his presentations, and he gave seventy-five talks per year, in venues ranging from tiny Amherst, Wisconsin, to Juneau, Alaska, to the island of Madeira off the coast of Africa. But after the terrorist attacks, he says, “no one was hiring, because the future was too scary.” He closed his office and spent some time rethinking his company. “The speaking business is capricious,” he says. “You may not be hot tomorrow — [people] are always looking for something new.”

That doesn’t mean they’ll embrace the new, however. When Zach was delivering a presentation about some of the changes ahead, one young woman in the audience caught his eye. She was turned away from him and curled up in her chair in almost a fetal position, and she protested, “I don’t want this.” It’s probably not a coincidence that she was in the newspaper industry, which is undergoing a significant upheaval these days.

With many jobs now being automated or outsourced to Asia, with information overload and breakthroughs in science and technology coming at breakneck speed, that reporter in Zach’s audience is not alone. “I think there are some people who don’t want to see the issues,” says Lori Silverman ’79, MS’81, who, although she’s not a futurist per se, works with companies on strategic planning. “They go to work, they come home, they sit in front of the TV, or they might play with the kids. As far as they’re concerned, they don’t need to worry about what the bigger world holds for them.” They believe...
that society will take care of them, she says, which is fine, until the day when their companies’ pension plans go bankrupt or can no longer pay for their healthcare after they retire.

Fifteen to twenty years ago, that was okay, because organizations had systems in place to help care for people. But “you can’t be that way today,” she says. People need to ask themselves, “What’s your wakeup call? What’s going to cause you to really think about preparing yourself for your next career choice, for what you do later in life?”

Zach agrees. “The great failure of the average person is not to take personal responsibility for the future,” he says. As he explained to an audience of high school students, “Anyone who stops learning and who stops playing — the future doesn’t have a place for you. If you ever stop learning, you’re toast.”

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“Lots of times when people do strategic planning, they’re only using their opinions. I can guarantee you two things,” she says. “They will woefully underestimate what will happen in the future. The other thing they’ll do is miss issues on the fringe. And changes don’t come from within your industry — changes come at the fringes of society.”

She cites as an example the rise of Facebook, which has caused some companies to question whether they need to have a presence on the social networking site.

The first thing Silverman does is to have her clients write a series of questions they’d like to answer, whether it’s regarding competitors, technology, trends, or anything else that could have a future impact on their organization. She then has them break up into teams and go in search of what experts are saying about a specific question five to twenty years into the future.

She wants each team to discover the answer on its own, she says, “because when they find it, they actually take ownership of it. ... Their eyes are opened to a world that is far broader and deeper than the one [in which] they actually live today.” In some ways, this method lessens her clients’ stress and anxiety, and in other ways it heightens it. “If they find disconcerting information about the future, that can be disquieting,” she says. On the other hand, “they get extremely excited, because they see possibilities for a better world for themselves and for their organization [through] the decisions that they make.”

You Can Run, But You Can’t Hide

When Zach speaks, he emphasizes how fast the pace of our lives has become. We are “hyperliving,” he says. “We’re skimming along the surface of life, and the whole goal is not to enjoy what you’re doing, but simply to finish what you’re doing so you can go and do the next thing that’s waiting for you.” The average American, he says, spends less than fifteen minutes having lunch. And it’s even worse for people with laptops, Internet access, and cell phones. One study found that those who use all of these technological tools work, on average, eight hours more per week than those who don’t.

And that work is often very fragmented. Zach frequently quotes from another study that found office workers have to open eight windows open on their computer screens at once. They spend an average of eleven minutes on a project before being interrupted, and this time is typically broken up into three smaller tasks. It takes workers twenty-five minutes to return to their original tasks after being interrupted, and 40 percent of the time, they wander off to completely different tasks instead.

Zach doesn’t think living at warp speed is necessarily a good thing. He is fond of using a quote from writer and philosopher Eric Hoffer: “The feeling of being hurried is not usually the result of living a full life and having no time. It is, rather, born of a vague fear that we are wasting our life.”

In Nine Shift, Draves maintains that in the twenty years between 2000 and 2020, some 75 percent of our lives will have changed dramatically as we transition from the Industrial to the Internet...
One View of Changes in the Near Future

Bill Draves ’71, founder of the Learning Resources Network, believes these nine changes will alter our lives in the next ten or fifteen years. Most of them, he says, are already well under way.

1. Most people will work at home.
   Organizations ranging from Best Buy to the federal government are moving more employees into telecommuting, because people who work from home work longer hours and are more productive.

2. Virtual offices, or Intranets, will replace physical offices.
   In an office, managers supervise how employees spend their time, and that’s simply dysfunctional, because businesses are really interested in results. Bosses will switch from supervising activities to supervising outcomes, which is far more efficient.

3. Networks will replace the organizational chart.
   In the old pyramid structure, which was based on the factory model, information was limited to the top brass. But with a network, relevant information and decision-making power is shared across the organization, increasing efficiency.

4. Trains will replace cars.
   In Europe you can now take a train from Paris to London (a seven-hour drive) in just two hours. The United Kingdom is going to spend $20 billion on trains in the next fifteen years, and Toronto is devoting $6 billion to a light rail system. Trains will be equipped with wireless access, allowing people to work and travel at the same time.

5. Suburbs will decline.
   As knowledge workers become more acutely aware of the value of their time, they will want to live within walking or biking distance of shops, stores, and light rail systems. Poor people will move to the suburbs. In fact, as of 2007, more poor people are living in the suburbs than in cities. This shift will have an environmental payoff: the Baltimore Sun recently reported that simply eliminating suburbs would reduce driving by 20 to 40 percent.

6. New social infrastructures will evolve.
   In particular, new systems of health care and continuing education are needed, because people will change jobs almost yearly in this century. People will need to receive continuing education no matter where they work or how often they change jobs.

7. Values and work ethics will change.
   All of our values are for the factory — showing up on time, putting in long hours, and getting your work done. Now, because time is so valuable and because knowledge keeps expanding, we need to work faster and smarter. In the last century, if you were learning with others, it was called cheating. In this century, we value collaborative learning because people are more productive when they work with others.

8. Half of all learning will be online.
   All subjects, even those such as music and ballet, can be enhanced with an online component. Online learning will do for education what the invention of the tractor did for food, making learning opportunities cheaper and more readily available in a wider variety of options.

9. Technology will replace buildings.
   Higher education has this “edifice complex” — we’re still spending too much money on buildings. In this century, technology expenses have to exceed building expenses, or individual institutions will be in real danger, because buildings are simply obsolete — they’re just a cost.

And the feeling may turn to alarm if people listen to Ray Kurzweil, an inventor and futurist who is a well-known proponent for the Singularity. Kurzweil writes on his Web site, “An analysis of the history of technology shows that technological change is exponential. ... So we won’t experience one hundred years of progress in the twenty-first century — it will be more like 20,000 years of progress (at today’s rate).” To arrive at that conclusion, Kurzweil extrapolates from the oft-quoted Moore’s Law, which...
states that the capacity of a computer chip doubles every eighteen months. The futurist believes that this principle can also be applied to nanotechnology and most other advances, as well — albeit at an even faster pace than Intel founder Gordon Moore originally envisioned.

But even some of those in Kurzweil’s camp disagree that things will change that rapidly, arguing that the futurist is using something called static analysis, which maps out statistical projections while failing to account for human variables and other factors that could change over time. The Economist magazine satirized this particular kind of reasoning by coming up with a model for safety razors, which have gone from a single blade to five blades in the last ninety-odd years. Projecting a hyperbolic curve on a graph, it appears that the number of blades on a razor should reach infinity sometime before 2020.

Still, at least one recent development is giving weight to Kurzweil’s views. In September, the New York Times reported that an IBM research fellow is developing something called racetrack memory that could blow Moore’s Law to bits. Stuart S.P. Parkin, whose previous research brought you the enhanced storage capabilities of the iPod, may have devised a technology that could blow Moore’s Law to bits. Stu- art S.P. Parkin, whose previous research brought you the enhanced storage capabilities of the iPod, may have devised a technology that could blow Moore’s Law to bits.

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Golden loves what he does. Like many futurists, he considers himself an optimist. He concedes that as technology and science change, “conversation on ethics and values tends to lag … [But] in the end, I think that what is good prevails, and that human beings and communities simply adapt.” His optimism, he says, is not based on blind faith, but on past historical shifts. “When human beings went from an agricultural to an industrial society, it was a very disruptive thing. At the time, if you had extrapolated forward, you would have thought that we were forever going to be working in awful conditions, but things changed … the laws catch up.” Extraplating the present, he says, often discounts how values and human nature will change.

Although the main driver of change right now is digital technology, Golden says, the next wave will be biological technologies, which will require us to have new conversations related to values. He sees nanotechnology as an area of hope, because “people who are involved in nanoscale science are actually getting ahead of the curve and developing ethical guidelines now.” He cites a recent announcement by DuPont to develop a set of research guidelines in conjunction with Environmental Defense (formerly the Environmental Defense Fund).

“We impact will these tiny particles have on our environment and humans?” he asks. “What DuPont is saying is we want to understand the implications before we proceed.”

Back to the Future

Zach would like to see more of this type of forethought before we plunge blindly ahead. In a time of tumultuous change, when we can’t possibly keep up, he advises that we have to “figure out the things that don’t change — and when you find those, it gives you a place to stand.”

Not all change is progress, he says, and “sometimes the most radical thing to do is to not change.” Zach bemoans what he sees as an obsession with technology and business as being the ultimate sources of solutions and meaning, and believes that we need to pay more attention to history, community, and families.

He describes his favorite futurist as G.K. Chesterton, because he believes that Chesterton embodies something that we are short of in our modern era: the willingness to learn from the past. “The more things change,” Zach says, “the more we must learn from the past. We live in an age where anything is possible, but that’s scary, because not all things should be possible.” Chesterton advocated, he says, “giving votes to our ancestors. We assume that today is the most important thing and dismiss the past, blaming the past. History is full of accomplishments, and we should have gratitude for them. We have temporal arrogance.”

And finally, although we may be opening a Pandora’s box of nanotechnology, genetics, and robotics, Zach points out that the last thing left in Pandora’s box was hope. “You must have hope,” he says. “It’s a moral imperative.”

Niki Denison, who is co-editor of On Wisconsin, has always wanted to live in the past, and she can’t wait until technology advances to the point where time travel will allow her to do that.