

The Future is Now

New millennium
brings new challenges

by Cynthia Scanlon

In a unique, and some might say, bold step forward, the East Valley Partnership asked three experts in their field to take a look at some of the U.S.'s demographics and trends and then report on what impact that might have on Arizona, specifically for business and education in the East Valley. As might be expected, some of the findings were expected and some surprising.

For openers, business of the future will move ever faster with emerging technology becoming the driving force behind the movement, according to David Thornburg, Ph.D, a futurist and director of Thornburg Center Emerging Technology Futures.

Thornburg, one of the speakers invited to the Future Forum held in Mesa says, "We live in the midst of a digital tornado that is sweeping across the planet." And it's going to affect everything in its path, he says, a fact that could bode well, or not so well, for Arizona depending on several factors.

To give an idea of the velocity of this change, Thornburg asks his audience to

consider this: It took radio 38 years to get 50 million users; television took 13 years to capture those users; the Internet took just four years.

He cites other examples:

- "In the 1980s, it took nine years to discover the gene for cystic fibrosis," he says. "In 1997, the gene for Parkinson's Disease was found in just nine days."

- Thornburg sees the microchip, already staggering in its capabilities, doubling in power every 18 months. For instance, the computer chip now used in those cute musical greeting cards, the kind you toss in a few days, has the technological capacity equal to the computer capacity in 1950, he says. Without question, this technology is and will continue to impact everything from buying and repairing cars to programming computers, to booking airline reservations to, well, just about everything in our lives. And it is going to happen at dizzying speed, says Thornburg.

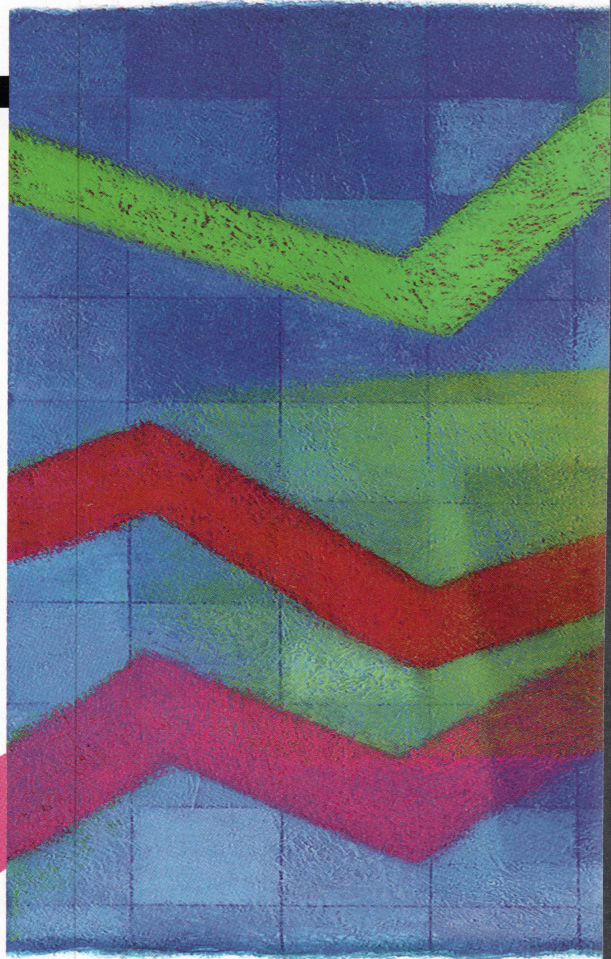
But, he cautions, we have to build in balance. He admits, "The biggest piece of

technology in my home is my Steinway piano." Thornburg is not a fan of people who work until they drop just because technology may allow them to do so. "People have become slaves to their companies," he says. "They are putting in 60 hours a week and probably not being very effective."

Still, all of this change and technology will have huge ramifications on the business and educational community, a central theme of the forum. One of the biggest implications in the coming years will be on employment. According to the U.S. Department of Commerce, between 1996 and 2006, this country will need 1,378,000 new information technology workers.

Currently, the shortage for these workers is so severe, says Thornburg, that employers in Silicon Valley are offering high school graduates \$50,000 signing bonuses. "We're in the middle of the information age, and we've run out of information workers," says Thornburg. "It's a big challenge."

In fact, such a challenge, Thornburg says





recruiters are now “hanging out in college dorms because that’s where the future is.”

This demand for younger workers comes just at a time when the U.S. population is getting older, according to demographer Harold Hodgkinson, a demographer and co-director at the Center for Demographic Policy. By the year 2010, there will be 17.8 million people 45 to 64 years old, he says. And 4.6 million people will be 65 or older. “So the country is aging very rapidly,” he says. This trend will greatly impact children and the educational system, he adds.

As people grow older, he says, they become less interested in children and schools. He says many areas, including Phoenix, will have difficulty creating educational reform, and school budgets may become a battleground. Phoenix is currently experiencing this. Sun City has continually refused to vote for school bond issues that would raise their property taxes. Educational debates are regularly waged in the state legislature. “Only one house in four [in Arizona] has a child in public

schools,” says Hodgkinson. “So three-quarters of your population will vote against a school bond proposal.”

He says connections between children and adults are being lost. “We don’t know kids very well. And we are happy to bash schools because we don’t know schools.”

Carol D’Amico, Senior Fellow at the Hudson Institute in Indianapolis, Ind., has recently co-authored “WorkForce 2020,” an update of the think tank’s “WorkForce 2000,” published in 1987. In this new version, the institute took a close look at how technology is going to impact this country and what it means for employers and employees in the next 20 years. “We are going through change, and people are uncomfortable with it,” says D’Amico, who has been cited in national publications and testified in front of Congress on work force issues.

What the institute found was that the jobs that are expanding will require advanced math skills. “We should not be letting kids out of school without algebra, calculus and

statistics,” says D’Amico. “Only 2 to 4 percent of our students can perform math at an advanced level.”

D’Amico is also concerned that youth are allowed to meander through their 20s, moving from job to job. “We are the only country that tolerates this period of letting kids take 10 years to ‘find themselves,’ but we lose 10 years of a person’s productivity,” she says.

But it is not just young workers who are being unpredictable. Interestingly, D’Amico says in surveys the Hudson Institute regularly conducts, the Baby Boom Generation (those born between 1946 to 1964) say they are not anxious to leap at retirement, when the time comes. The first wave of eligibles will hit in 2010. This, she says, may have unknown implications for companies and future employees. “We don’t know what Baby Boomers are going to do,” says D’Amico. “[They] say they want to work well into their 70s and 80s.

What does this mean for government and corporate policies? “We don’t know.” But

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we may very well find out, according to Hodgkinson. "Middle age is now 50 to 75 years old," he says. "If you can make it to 65, your chances of living to 85 improve hourly," he quips.

He also points out that there are currently 57,000 Americans over 100 years of age. All of this is going to add up to serious communication between employers, employees and schools, says D'Amico. But, as she travels throughout the U.S., she says she has yet to find a real working relationship between business and educational communities. "Employers don't really have a say in what goes on in curriculums in schools, and that is going to have to change," she says.

Business and education have begun to have those dialogues, according to Allan Price, vice president for Institutional Advancement at Arizona State University. Price recognizes the challenges that each face in the future, but points out that schools here in the Valley are beginning to respond. "ASU East has just started the Applied Baccalaureate Degree, which will allow people to take their two-year technical degree at a community college and add two more years to it to end up with their bachelor's degree," he says.

Price adds Arizona is not the only state to be faced with properly preparing kids for business. "It's a national problem," he says. "It's exacerbated in Arizona because we have such a strong presence in the high-tech industry."

According to Hodgkinson, Arizona's demographics will begin to shift to include large segments of the Hispanic and African American population, while the Caucasian population will decline. Price sees this future shift as good for Arizona, but it will represent some problems that will need to be addressed. "ASU is No. 2 among all research universities in the number of Hispanic faculty at the university," he says. "But it has real implications for the institutions that make up the state. We have to be better at making sure that minority students get through the K through 12 system and then go on to higher education and graduate."

While Price acknowledges that Arizona will have to be better prepared to offer quality education to minority students, he is pleased that ASU is moving in that direction. "We had the largest, most academically prepared and most diverse freshmen class we've had at the university this year," he says. "There's work to do, but it's being addressed."

Business, too, will have to face its own challenges, especially employees, says D'Amico. The new business environment, she says, will borrow from sports, becoming an "environment of free agency," where employees work for the highest bidder and don't plan on staying around for a retirement party. "For older workers, it will be uncomfortable," she says.

But she insists older workers are going to have to get used to it. And this shift in attitude to a new working frontier, she says, is going to have to start on an individual and organizational level. D'Amico says she was recently visiting the corporate offices of the American Association of Retired Persons in Lakewood, Calif., when they told her, "You cannot expect 50-year-olds to learn new skills."

"If they are right," says D'Amico, "we are in trouble."

Despite the both positive and not-so-positive points of view expressed at the conference, it was, all in all, an "intellectually stimulating" afternoon, according to Kerry Dunne, executive director of the East Valley Partnership. Dunne says the whole point of the forum was to pull the business community, educators and others involved in policy together to prepare and plan for the future. "We wanted to do something so strategic thinkers and planners could look around the corner and see what's coming," he says. "It stimulated a lot of thought on where we are going to go and how we have to reposition or position our business to catch the tidal wave."

Dunne agrees that business and employment in Arizona may undergo some big changes in the coming years. And he agrees the business community will have to be prepared. "We need to really dissect our labor force and the jobs that are needed," he says. "This kind of data and these kinds of meetings allow us to begin thinking like that."

He adds, "A lot of educators in that room heard these things. I'm sure they were fighting words to them, but it's nice to get the information out on the table."

Price agreed. "We tried hard not to create a cheerleading session," he says. "We wanted to let people [express] different points of view and put the possibilities for the future on the table. Then we let people draw their own conclusions about what that means. At the end of the day, I felt we had accomplished that."

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