

The genetics, digital, and knowledge revolutions

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A week ago Saturday, I attended a lunch at the Caribe Hilton sponsored by MMM, our largest provider of Medicare Advantage services. Next year, MMM will pay healthcare providers in Puerto Rico nearly \$1 billion and, by 2008, it will exceed \$1.5 billion. The luncheon speaker was Juan Enríquez, director of the Life Sciences Project at Harvard Business School, where he is building an interdisciplinary center focusing on how business will change as a result of the life-sciences revolution.

Enríquez's presentation couldn't have been more important to us in Puerto Rico. The ballroom was full of doctors and other healthcare providers from all over the island and the next day the press focused on the profound change that research in genetics is bringing about in medicine by tailoring physicians' prescriptions to cure specific illnesses. Gene chips will lead to personalized medicine. You will be able to test whether one medicine or another works better for you before you take it and doctors will focus more on prevention and less on treatment.

Important as this message was to all the healthcare providers present, there was another important message, which ties in to what Jorge Silva Puras is doing in Fomento and to what I have been writing about in previous columns for CARIBBEAN BUSINESS. This message is more fully developed in a book by Enríquez titled *As the Future Catches You*, which clearly explains the impact of the genetic, digital, and knowledge revolutions on economics and our lives. Creating wealth no longer requires many hands. Individuals are giving birth to entire new industries that rapidly become bigger than the economies of most countries. Wealth will be more and more concentrated and those with knowledge to sell will be the winners.

Knowledge is what Silva Puras' *Operación Mentes a la Obra*, or, as I have called it, Operation Brain Power, is all about. Our concentration of pharmaceuticals and computer companies offers us a unique opportunity to insert Puerto Rico into the genetic, digital, and knowledge revolution that is rapidly transforming the creation of wealth around the world. It will require the changes occurring in Fomento and in our system of higher education, about which I already have written, and these changes will be difficult and will require strong leadership. It is, however, an opportunity we can't afford to miss because, as Juan Enríquez points out in his book, "technology is not kind, it doesn't say 'please' but slams into existing systems and destroys them while creating new ones. Countries and individuals can either surf new and powerful waves of change—or get crushed trying to stop them."

Drawing from a quote by Winston Churchill, Enríquez tells us, "The Empires of the Future are the Empires of the Mind." No one in Puerto Rico thinks of creating any kind of empire. That isn't the point. The point is that the strength and prosperity of the island depends on what we can do with our minds, not

on finding off-shore oil or on the availability of natural resources. Toward this end, countries such as Puerto Rico need to highly educate their population so that they may be participants in the knowledge revolution, we must shake cultural traits that inhibit entrepreneurship, our government must adopt policies directed toward that end and provide economic and political stability so that creativity may flow and prosperity may grow.

Amid the depressing spectacle of seeing our legislative leadership and the media focusing at the end of the last session of the Legislature on the proprieties of a videotape from the security cameras of the Capitol, I was glad to hear that Silva Puras' restructuring of Fomento won legislative endorsement. It serves as a beacon of hope that we shan't lose these three years in launching Operation Brain Power with consensus from both parties in government.

Operation Brain Power has the beauty of being status-neutral. We can concentrate on knowledge, research, and development without the need of federal tax breaks particular to the Commonwealth. We don't need the powers of an independent country to undertake it. Educating and training our people will serve us just as well as state of the Union, an independent country, or an autonomous Commonwealth. Therein lies the basis for the ample political consensus that we need to bring about the important changes necessary for this strategy to place Puerto Rico in a competitive position in the genetic, digital, and knowledge revolution.

We must move fast or we will miss the boat. Another point made by Enríquez is what he calls the digital-genomics diaspora. This already is affecting Puerto Rico and will do so increasingly if the opportunities for our people aren't created here on the island. In a very interesting survey of foreign Ph.D. students in science and engineering who intend to remain in the U.S. after graduating from a U.S. university, it turned out that 38% of Mexican students intend to remain, 51% of French students, 59% of German students, 70% of British students, 79% of Indian students, and 85% of Chinese students.

The digital-genomics diaspora means that an increasing number of people around the world are moving to countries with industries where they can maximize the application of their talents and enjoy a decent quality of life with respect and security. This is happening to Puerto Rico residents right now. Our scientists, doctors, engineers are leaving in large numbers for the U.S.; not to mention those who stay there after obtaining their degrees.

We should do well to heed Enríquez's advice:

"A country's job, a government's task...
Is to grow, develop, keep, attract talent...
And make sure this talent creates and
protects new knowledge...
That can launch new companies...
Otherwise, there is no economic growth..."

No funding for the arts, no welfare, no stability.”

Operación mentes a la obra must be structured and put in place promptly. It can give Puerto Rico a collective sense of purpose. A commitment to invest in a future that we all can share. We have the mission and the vision. There is no time to loose.

