YoU DON’T hAVE TO be dYslexiC to be a millionAirE, but iT certAIInLy dOn’t hurt. As Thomas West ’65 pointed out in a recent article, an English study “has revealed that millionaires are significantly more likely to suffer from the condition [of dyslexia] than the rest of the population. Psychologists who analyzed the mental makeup of business winners found learning difficulties are one of the most important precursors of financial success.”

For most people, including many researchers, the correlation between success and dyslexia — about 40 percent of 300 millionaires identified in the BBC study had been diagnosed with the condition — comes as a great surprise. Generally, dyslexia is viewed as a “deficit,” a problem that interferes with formal education. Consequently, West said, “the research effort has been “almost wholly devoted to reading problems and ways they might be remediated.”

For West, however, such an understanding of dyslexia is one-sided and inaccurate. According to him, the “dyslexic kind of brain” appears to have “distinctive [and often hard to measure] special capacities.” In particular, those qualities relate to “seeing patterns that others do not see” as well as distinctive ways of perceiving three-dimensional space and visual material — highly desirable traits that can be obscured by surprising deficits.

Among the examples West cited to demonstrate this “way of seeing” was stock broker Charles Schwab, who said about his own dyslexia, “I’ve always felt I have more of an ability to envision, to be able to anticipate where things are going, to conceive a solution to a business problem than people who are more sequential thinkers.”

A different way of seeing

“Several years ago, I was intrigued to learn that some neurologists were coming to believe that certain forms of early brain growth have beneficial effects at the same time that they produce notable difficulties in brain function,” West wrote in the preface to his first book. Impressed by the fact that

Perhaps the most significant con- team that West draws from his own research is that some of the most orig- ing the printing press some 500 years ago. With the advent of computers, however, the strict separation between illustration (or pictures) and type is breaking down. Consequently, West argues, image skills are gaining value relative to the word skills that have long been dominant. “Perhaps,” he concludes, “it is time to recognize that many of the problems that dyslexics have are, in reality, artifacts of an old print-based technological culture whose prime is past. Perhaps it is time to recognize that many of the talents that many dyslexics exhibit are, in reality, artifacts of a new image-based technological culture whose prime is yet to come.”

A typical case

In many ways, West’s own childhood reads like a typical case study of a young person with dyslexia. Both par- ents were successful artists, who studied at the Pennsylvania Academy of Fine Arts in Philadelphia. Over the years they won several prizes for their paintings, including rural and river scenes near Centreville, Md., where West grew up.

“Visual thinking,” as well as dyslexia, tends to run in families. West explained. Of course, as a child he had no idea what these terms meant. He was not diagnosed as dyslexic until he was 41 years old. He was aware that he “could turn a hand at any kind of art and craft.” But, he said, “I could barely read for the first three or four years of pri- mary school. And I was always puz- zled as to why it was so hard for me and so easy for almost everyone else.”

West had no answers for the diffic- ulties he had in school, but he did notice that learning became easier as he grew older. “Basically, the curricu- lum changed,” he said. “The things I was poor at — memorization and mechanical skills, short-term memory — were important in the lower levels. But at the higher levels of education, when you get to conceptual things and understanding how things are put together and seeing the big picture, I was good at that. You’re not asked to do that in first grade.”

West found the same kind of learn- ing that focused on ideas rather than facts and dates at Gettysburg College, and he continues to praise the liberal education and the control and then began to help design and consulting company in New York University. Still not understanding what it was saying, as a living person, he added, “I think that’s the only way I can explain it. The volume of work was just too much for me to do well. So, in a sense I failed a second time.”

Failure for West, however, came only in graduate school, which required an ability to process and memorize substantial amounts of writ- ten material in short periods of time. After leaving Georgetown University he landed a job with a small engineer- ing and consulting company in Bethesda, Md., where he discovered an ability to work with computers. “I worked on redesigns and detailed specifications, figuring out how to translate an old system to a new sys- tem. And I realized that everything I was asked to do, I could do with great ease — except feed the information into the computer,” he said.

From Thinking Like Einstein

Perhaps it is time to recognize that many of the problems that dyslexics have are, in reality, artifacts of an old print-based technological culture whose prime is past. Perhaps it is time to recognize that many of the talents that dyslexics exhibit are, in reality, strikingly appropriate for a new image-based technological culture whose prime is yet to come.
“New visualization technologies will show us a side of our brains that has mostly atrophied, creating a new balance between words and images.”

For the next 17 years West pursued a successful career as an analyst for a variety of engineering and consulting firms and research organizations. He also managed studies for the Department of Energy and what is now the renewable energy research laboratory, integrating strategic planning for several federal government agencies. Over the years, he participated in or led trade missions to five Asian nations, assisted with a market study in Saudi Arabia, and helped manage a large international energy research, design, and training program in Egypt for USAID.

During those years West also gave considerable thought to how the brain works, noting among other things that the engineers and economists he worked with easily dealt with numbers but had trouble with words and writing. In his own case, he had no difficulty working around scientists and engineers despite his own problems with dyslexia, noting among other things that the visualization technologies he worked with easily dealt with numbers but had trouble with words and writing. In his own case, he had no difficulty working around scientists and engineers despite his own problems with numbers. "The conceptual side always came easily," he said, "but remembering numbers and facts was difficult. I always had to make sure that I had looked something up, had written it down, and had it on paper in front of me. I couldn't rely on my memory.”

West also noted a pattern in his work experience. "As a general rule," he said, "I would start in these various jobs as maybe a low-level or mid-level worker. But then I usually got into the writing and planning and then management phases of the job." West began to realize that his changes in position came because he had developed certain techniques, learned, he said, "with some pain. You're constantly learning how your brain works. And I was always using my ability to analyze, to notice what was going on, to figure out what was important in some new field, and to write about it — and then, of course, I would also get somebody to check my spelling."

West's own personal success in learning to understand how his brain worked and how his own talents could best be used might have been sufficient accomplishment in itself, but then his two sons, Benjamin and Jonathan, started having trouble in school. "From the first days of school they started repeating my own experience," West said. "I began to understand that these problems had really controlled the lives of my artist father and myself. I realized that my sons were going to have to go through what I went through. But I wanted it to be different for them. So, I said to myself, I had better do some research, and I started to write.”

In the Mind's Eye
For the next four years West spent much of his time researching dyslexia in the Library of Congress and the U.S. National Library of Medicine. "I really didn't know how long it was going to take," he said. "But I had a lot of confidence at the time and thought I was doing something that was important to me and perhaps a few others. Maybe a lot of others." The result of his efforts was the publication of In the Mind’s Eye.

Although the book focuses on dyslexia, it has a much broader scope, arguing that major advances in computer visualization technologies promise to transform education and the workplace. Already, West said, "the perceived value of visual talents for understanding patterns in complex systems in business, the sciences, and other fields is greatly increasing. Many dyslexics have high visual talents and are already leaders in certain areas of technological innovation as well as science and business.”

To West’s surprise, the publication of In the Mind's Eye led to a new career. Since the book’s publication, he has given presentations and talks to scientific, medical, art, media, and business groups in the United States and throughout the world — Australia, New Zealand, Canada, Great Britain, Germany, Spain, Italy, Ireland, Switzerland, Sweden, The Netherlands, Hong Kong, and Taiwan.

For the past several years West has also written a column on visualization issues for a quarterly publication of the international professional society for computer graphics artists and technologists. These columns were turned into a second book, Thinking Like Einstein: Returning to Our Visual Roots with the Emerging Revolution in Computer Information Visualization, which was published in 2004. Currently, he is working on a third book with the working title Seeing What Other People Don’t See, which examines creativity and dyslexia in several scientists and scientific families.

Lessons learned
When asked in an interview what lessons he had learned about thinking, West responded: “That things aren’t necessarily what they seem. Some people who appear not very proficient in the conventional school system fly to the top of the class when put in a more visual system where close observation and creative interpretation of evidence is important. This is what happened to the young Albert Einstein. “I believe the powerful changes in computer-visualization technologies will change our culture as much as the printing press did in the past. New visualization technologies will show us a side of our brains that has mostly atrophied, creating a new balance between words and images.”

Thomas West can be reached at thomasgwest@aol.com or thomaswest@gmail.com.