

## Vincent Rodgers

When Vincent Rodgers was six years old, he and his twin brother Victor got toy robots for Christmas. The robots could walk across the floor and shoot ping pong balls from their arms. "But the most fascinating things about this," he recalled, "was a panel you could take off the side of it, and you could actually see inside, all the gears and all the workings inside. After that, I was hooked," he said. "I had to see how all these things worked. I was always in competition with my twin brother, to find out who could be the smartest, who knows the most about how everything worked."

Vincent and Victor are still competing to learn about the world, but they have chosen different ways of learning. Victor became a chemical engineer, while Vincent became a physicist. "[Victor] wanted to be much more practical with his way of handling things, and I wanted to really learn what was going on in a fundamental level," Rodgers said.

Vincent studies an offshoot of superstring theory, a theory that says the universe's fundamental constituents are tiny vibrating strings. He studies the way gravity works in various conceptions of string theory. He uses mathematics to describe his theories, and he sometimes takes a pen and paper to bed with him at night to make calculations. "It's fun," Rodgers said. "I think there's some really great stuff [in physics] to play around with."

Although Rodgers and his twin brother have gone into different academic fields, they still talk two or three times a day. "[Victor is] a lifelong friend," Vincent Rodgers said. They went to college together at the University of Dayton, then went their separate ways for graduate school. When Victor was applying for a job in the University of Iowa's chemical engineering department, he heard that the physics department was looking for a new theoretical physics professor. He recommended his twin brother. Soon after, Vincent was hired by the physics department at Iowa, and his wife Padmini, was hired by the Department of Information Science. Today, the brothers play racquetball and lift weights together. "If his car breaks down, he'll call me," Vincent said. The brothers retain some of the sibling rivalry from their childhood. "He realizes that I'm smarter than he is," Vincent said - although he admitted that Victor would probably say just the opposite.

Vincent Rodgers teaches a class at Iowa called "Physics from Head to Toe," which studies how physics can apply to the human body. The class talks about how particles cross membranes in cells, how the brain sends electrical signals, and many other ways physics can describe the body. "I like learning different things which are not in my field," he said. He is also learning to



play the piano, attracted especially by the music of Johann Sebastian Bach. "Bach was a mathematical genius," Rodgers said."

Rodgers greatly admires Albert Einstein, who in addition to discovering new ideas in physics such as the theory of relativity, also campaigned for world peace and wrote about the society around him. In his 1950 book, ***Out of My Later Years***, Einstein wrote about racism in segregated American society. "What can the man of good will do to combat this deeply rooted prejudice?" Einstein asked. "He must have the courage to set an example by word and deed, must watch lest his children become influenced by this racial bias." "He's much bigger than people already think he is," Rodgers said. "When you read the way [Einstein] acts throughout his life - this guy was really on it."

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