

## Changing Students' Lives\*

John Freeman

*Rice University*

It is my honor and great pleasure to introduce my colleague and dear friend, Dr. John W. Freeman, recipient of the 2016 AGLSP Faculty Award. John received his B.A. from Beloit College in 1957 and his M.S. and Ph.D. under Professor James A. Van Allen at the University of Iowa. His dissertation was based on data from the Explorer 12 spacecraft, and it helped to refine our early knowledge of the Earth's magnetosphere. From Iowa he went to NASA Headquarters in Washington D.C., where he served as staff scientist for early space physics projects. In 1964 he arrived at Rice University, where he moved through the ranks teaching both graduate and undergraduate space and physics courses, including a series of natural science courses for non-science majors.

While teaching he pursued research in Space Physics including satellite investigations of space radiation. In 1965 he was selected by NASA to serve as Principal Investigator for an experiment that was to be deployed on the Moon by the Apollo astronauts. This instrument, called the Suprathermal Ion Detector Experiment, was deployed on the lunar surface by the astronauts during the Apollo 12, 14, and 15 lunar landing missions. For this work he was awarded the NASA Medal for Exceptional Scientific Achievement, the Apollo Achievement Award, and the Distinguished Service Citation from his Alma Mater, Beloit College. Following Apollo, he turned to space applications, working on a program to evaluate the feasibility of the satellite solar power concept. During this time he served as Editor-in-Chief of *Space Power*, a journal dedicated to space solar power

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\* The present remarks were delivered on October 21, 2016 in honor of, and on behalf of, Dr. John Freeman.

applications. Later he turned to computer modeling of the space radiation environment and led a team that developed computer models of the Earth's magnetosphere. These models were used by the U.S. Air Force for forecasting space weather. To make the public aware of the hazards of space, Dr. Freeman published a book on space weather for a general audience: *Storms in Space*. He is author or coauthor of numerous papers on Space Physics.

Dr. Freeman is also Professor Emeritus of Physics and Astronomy. During his active years on the Rice faculty he served as Speaker of the Faculty Council, Master of Lovett College, and Vice-Chair of the Department of Space Physics and Astronomy. He holds three patents, two of which are related to space.

John served as the Founding Director of the Master of Liberal Studies Program at Rice University until his retirement in August 2016. He not only worked selecting the first faculty, but was instrumental in developing the curriculum in the areas of Humanities, Social Sciences, and Natural Science. He has taken a major role in shepherding current students and the 120 alumni in the program from their initial interview to their graduation and beyond. He taught regularly in the program, including such courses as Astronomy, Science in the First Person, The Grand Design, Astrobiology, and Effective Thinking, and his classes were eagerly awaited and attended. In 2011 he oversaw the creation of the Master of Liberal Studies Writers Group, of which he was a member, sharing his talents as playwright, poet, and writer of creative nonfiction.

Dr. Freeman's leadership of the Rice MLS Program has been recognized nationally. He served a three-year term on the Board of the Association of Graduate Liberal Studies, and was the chairman of the membership committee.

In addition to his long and dedicated career at Rice, he was active in volunteer work on water projects in Haiti, the Yucatan Peninsula, and Cuba. He is also active in Rotary where he was named a Paul Harris Fellow for his work on installation of water systems in developing countries. He has also done lay casework for an organization dedicated to the prevention of child abuse and neglect and served as Chairman of the Board of Family Outreach of America. He is active in the Presbyterian Church and currently lives in Dallas with his wife, Phyllis.

*Rebecca Sharp Sanchez, Administrative Director of Graduate Liberal Studies, Rice University*

Dr. Freeman believes the single greatest contribution made by MLS programs across the nation is changing students' lives. Regardless of their age, their background, their former education, or their career choices, students who enlist in the program enter with one way of thinking and leave with a different one. In general, this way of thinking is better informed, fed by curiosity, and fanned by classroom discourse. Let me give you a personal example:

One class in which I enrolled was, "Contemporary Moral Issues." The final paper in the course required us to prove why we either supported or did not support the death penalty. This question was one I had been unable to answer over the span of my own lifetime. Besides researching the question from economic, social, legal, and religious perspectives, I interviewed individuals from both conservative and liberal leanings to garner their opinions on the topic. As a result of this research, I reached a personal conclusion that was a marked change for me: I finally knew how I felt about the death penalty.

Whether confronting ideological questions or grappling with pragmatic applications, exposing oneself to change means taking risks. As a scientist, taking risks for Dr. Freeman meant willingness for an experiment to fail. Dr. Freeman was appointed Principal Investigator for an experiment that was to be deployed on the moon by astronauts on Apollo 12, 14, and 15. Ultimately, the experiment succeeded, and NASA awarded Dr. Freeman the NASA Medal for Exceptional Scientific Achievement and the Apollo Achievement Award, among others. In spite of the tremendous odds the experiment posed, this risk was definitely one worth taking.

Likewise, Dr. Freeman took risks when he accepted the role of Director of the MLS program at Rice. How could he and his fellow academics apply what they had learned over a lifetime of teaching and transfer it to an amalgamation of English teachers, lawyers, doctors, and assistant football coaches, among many others? For starters, Dr. Freeman hand-selected the professors who would teach the courses to ensure that they made the knowledge accessible and intriguing—and manageable! Not only was Dr. Freeman head of the program, he was also a participating faculty member who was applauded by his colleagues and beloved by his students. As one former student explained, "Dr. Freeman taught me not *what* to think, but *how* to think."

In another demonstration of thoughtful leadership, Dr. Freeman insisted that science courses be an integral part of the

MLS curriculum. Each entering MLS student at Rice is required to take three core courses: one in humanities, one in social sciences, and one in physical sciences. Because of Dr. Freeman's vision for the program, English majors such as myself took a course in immunology, a marketing professional took a course in DNA, and, in a reversal of science education, a gynecologist took a course in classical music that later inspired her capstone. Regardless of one's intellectual persuasion entering the program, one typically departs with a new intellectual identity.

In short, we have all benefited from Dr. Freeman's expansive intellect, his visionary leadership, and his common touch. Inside the classroom, he was an academic extraordinaire who opened the world of physics to science-shy students. Outside the classroom, he was an extraordinary human being who shared his energy and enthusiasm for life by serving as a volunteer in third-world countries. From flying experiments to the moon to putting his hands to work right here on earth, Dr. John Freeman was an agent of change. And his change was always for the better.

*Peggy Roe, alumna of the Graduate Liberal Studies program at Rice University, class of 2013, and former student of Dr. Freeman*

## *In Memoriam*

Our friend and colleague, Dr. John W. Freeman, Professor Emeritus in Physics and Astronomy and Founding Director of the Master of Liberal Studies Program at Rice University, passed away on July 15, 2017 after an intense battle with ALS.

Dr. Freeman was an inspiration to all of his students. A scholarship in John's name has been dedicated by the MLS Alumni Association to assist students who demonstrate a financial need.

