

Finding Aid to The HistoryMakers® Video Oral History with Sylvester James Gates, Jr.

Overview of the Collection

Repository:	The HistoryMakers®1900 S. Michigan Avenue Chicago, Illinois 60616 info@thehistorymakers.com www.thehistorymakers.com
Creator:	Gates, S. James, Jr.
Title:	The HistoryMakers® Video Oral History Interview with Sylvester James Gates, Jr.,
Dates:	August 30, 2012
Bulk Dates:	2012
Physical Description:	8 uncompressed MOV digital video files (3:49:47).
Abstract:	Physicist and physics professor Sylvester James Gates, Jr. (1950 -) is known for his work in supersymmetry, supergravity and string theory. He co-authored the textbook <i>Superspace or 1001 Lessons in Supersymmetry</i> . Gates was interviewed by The HistoryMakers® on August 30, 2012, in Washington, District of Columbia. This collection is comprised of the original video footage of the interview.
Identification:	A2012_143
Language:	The interview and records are in English.

Biographical Note by The HistoryMakers®

Physicist and physics professor Sylvester James Gates, Jr. was born on December 15, 1950 in Tampa, Florida to Charlie Engels and Sylvester James Gates, Sr. His father worked for the U.S. Army, causing the family to move many times. Gates had lived in six cities by the time he reached the sixth grade. His parents always stressed the importance of education and his father bought him a *Encyclopedia Britannica* set when he was just eight years old, sparking his interest in science. Gates graduated from High School in 1969. With the encouragement of his father, Gates applied and was admitted to Massachusetts Institute of Technology (MIT). He earned his B.S. degrees in mathematics and physics in 1973. Gates remained at MIT for four more years, earning his Ph.D. degree in physics in 1977. His thesis, "Symmetry Principles in Selected Problems of Field Theory," was the first at MIT to deal with supersymmetry.

In 1977, Gates went on to attend Harvard University as a junior fellow in the Harvard Society of Fellows. He remained at Harvard until 1980, when he moved to California to work as a research fellow with the California Institute of Technology. In 1982, Gates accepted a position as an assistant professor of applied mathematics at MIT. During this time, he also served as director of the Office of Minority Education. Gates joined the University of Maryland as an associate professor of physics in 1984, and became a full professor in 1988. He briefly served as a professor of physics at Howard University from 1990-1993, before returning to teach exclusively at the University of Maryland in 1994. While at Howard, Gates served as the director of the Center for the Study of Terrestrial and Extraterrestrial Atmospheres. In 1998, Gates was named the John S. Toll Professor of Physics at the University of Maryland, becoming the first African American to hold an endowed chair in physics at a major research university in the United States.

Gates's work in mathematics and theoretical physics has greatly contributed to knowledge about supersymmetry, supergravity and string theory. He has written or co-written over 120 research papers and articles. Working with M.T. Gisaru, M. Rocek, and W. Siegel, Gates co-authored *Superspace or 1001 Lessons in Supersymmetry*, a

standard textbook on the topic of supersymmetry. Gates received numerous honors and awards, including being the first recipient of the American Physical Society's Edward A. Bouchet Award. In 2009, President Barack Obama named Gates a member of the President's Council of Advisors on Science and Technology. In addition to his research, Gates is known for advocating the importance of education and being able to easily explain complex physics theories to a non-physics audience.

Sylvester James Gates, Jr was interviewed by *The HistoryMakers* on August 30, 2012.

Scope and Content

This life oral history interview with Sylvester James Gates, Jr. was conducted by Larry Crowe on August 30, 2012, in Washington, District of Columbia, and was recorded on 8 uncompressed MOV digital video files. Physicist and physics professor Sylvester James Gates, Jr. (1950 -) is known for his work in supersymmetry, supergravity and string theory. He co-authored the textbook *Superspace or 1001 Lessons in Supersymmetry*.

Restrictions

Restrictions on Access

Restrictions may be applied on a case-by-case basis at the discretion of The HistoryMakers®.

Restrictions on Use

All use of materials and use credits must be pre-approved by The HistoryMakers®. Appropriate credit must be given. Copyright is held by The HistoryMakers®.

Related Material

Information about the administrative functions involved in scheduling, researching, and producing the interview, as well as correspondence with the interview subject is stored electronically both on The HistoryMakers® server and in two databases maintained by The HistoryMakers®, though this information is not included in this finding aid.

Controlled Access Terms

This interview collection is indexed under the following controlled access subject terms.

Persons:

Gates, S. James, Jr.

Crowe, Larry (Interviewer)

Hickey, Matthew (Videographer)

Subjects:

African Americans--Interviews

Gates, S. James, Jr.--Interviews

Organizations:

HistoryMakers® (Video oral history collection)

The HistoryMakers® African American Video Oral History Collection

University of Maryland

Occupations:

Physicist

HistoryMakers® Category:

ScienceMakers

Administrative Information

Custodial History

Interview footage was recorded by The HistoryMakers®. All rights to the interview have been transferred to The HistoryMakers® by the interview subject through a signed interview release form. Signed interview release forms have been deposited with Jenner & Block, LLP, Chicago.

Preferred Citation

The HistoryMakers® Video Oral History Interview with Sylvester James Gates, Jr., August 30, 2012. The HistoryMakers® African American Video Oral History Collection, 1900 S. Michigan Avenue, Chicago, Illinois.

Processing Information

This interview collection was processed and encoded on 5/30/2023 by The HistoryMakers® staff. The finding aid was created adhering to the following standards: DACS, AACR2, and the Oral History Cataloging Manual (Matters 1995).

Other Finding Aid

A Microsoft Access contact database and a FileMaker Pro tracking database, both maintained by The HistoryMakers®, keep track of the administrative functions involved in scheduling, researching, and producing the interview.

Detailed Description of the Collection

Series I: Original Interview Footage

Video Oral History Interview with Sylvester James Gates, Jr., Section A2012_143_001_001, TRT: 1:30:10 ?

Sylvester Gates talks about his family background. His maternal family consists of French ancestry. His mother, Charlie Anglin Gates, was born in around 1920 in Texas. After graduating from high school, she became a housewife. When Gates was eight years old, his mother was diagnosed with cancer and passed away three years later. Gates' father, Sylvester James Gates, Sr., who was of Native American heritage, was born in 1926 in Linden, Alabama. At the age of seventeen, he joined the U.S. Army during World War II and served on the Red Ball Express. Also during his twenty eight years of service, he became one of the first 100 African Americans to be promoted to rank of sergeant major. Gates shares stories of his father's experiences in the Army and talks about how his parents met.

African American families--Southern States.

Cancer--Diagnosis.

Mothers--Death.

World War, 1939-1945--Participation, African American.

Military promotions.

Video Oral History Interview with Sylvester James Gates, Jr., Section A2012_143_001_002, TRT: 2:29:50 ?

Sylvester Gates speaks of his pride of his collective Native American, Scottish and African American ancestry as a symbol of human "connectedness". Gates' family moved frequently due to his father's career in the U.S. Army. He lived in five different cities within Florida and Texas before beginning school in 1957 in El Paso, Texas on the Fort Bliss Base where he attended Travis Elementary School. The next year, Gates' mother was diagnosed with breast cancer and she died three years later at the Fort Sam Houston Hospital in San Antonio, Texas. Gates became captivated by science, space and airplanes at an early age. His earliest childhood memories are of seeing movies involving space rockets and astronauts. He was also fascinated by airplanes and enjoyed watching television shows with themes related to science and science fiction. Gates describes those experiences as being an impetus to his aspiration to become a scientist.

Racially mixed people--United States.

Children of military personnel--United States.

Breast--Cancer--Patients--Family relationships.

Science television programs.

Science in popular culture.

Video Oral History Interview with Sylvester James Gates, Jr., Section A2012_143_001_003, TRT: 3:29:40 ?

Sylvester Gates' family moved to Orlando, Florida after his mother's passing and his father remarried. He attended Hannibal Elementary School, which was segregated at the time, and was introduced to the diversity among black people. He also learned a great deal about culture and racism upon moving to Orlando. Gates then attended L.C. Jones High School where his favorite teacher was his physics teacher, Mr. Freeman Coney, who taught him Albert Einstein's theories. He enjoyed drawing, playing chess, and going to parties- all of which he did while maintaining high grades. Gates graduated valedictorian of his class and presented an address to his class entitled, "The Seeker."

African American families--Florida--Orlando.

Florida--Race relations.

Physics--Study and teaching (Secondary)--United States.

Einstein, Albert, 1879-1955.

Academic achievement.

Video Oral History Interview with Sylvester James Gates, Jr., Section A2012_143_001_004, TRT: 4:29:35 ?

Sylvester Gates dreamed of going to the Massachusetts Institute of Technology from the time he was fourteen years old. After graduating as valedictorian of his class from L.C. Jones High School in 1969, he went on to attend MIT. Upon moving to Boston, Massachusetts, Gates recalls being confronted with the most overt demonstrations of racism that he had ever encountered. He describes his experiences living in Boston, as well as his recollections of the assassinations of political figures during the Civil Rights Movement during his teenage years and during his time in college. Initially, Gates also struggled with the rigorous academic environment of MIT. However, after developing coping strategies and learning techniques, Gates managed to pass all of his freshman year courses and acquire the preparation needed to resume on his path towards becoming a scientist. Gates double majored in mathematics and physics.

Massachusetts Institute of Technology.

Racism--Massachusetts--Boston.

Assassination--United States--History--20th century.

Civil rights movement.

College freshmen--Massachusetts--Boston.

Video Oral History Interview with Sylvester James Gates, Jr., Section A2012_143_001_005, TRT: 5:29:30 ?

Sylvester Gates double majored in physics and mathematics at the Massachusetts Institute of Technology. Despite notions that science students are social recluses and tuned out from the world, Gates was able to maintain a balance between his studies and his extracurricular activities and interests. After receiving his B.S. degrees in 1973, Gates continued with his graduate studies at MIT in physics. While there, he studied with Ronald McNair and learned the importance of teamwork and the exchange of ideas. Gates talks about the background of his Ph.D. advisor, James Edward Young, and describes his journey towards choosing his doctoral project.

African American college students--Massachusetts.

Physics--Study and teaching (Higher)--Massachusetts.

Mathematics--Study and teaching (Higher)--Massachusetts.

McNair, Ronald E., 1950-1986

Faculty advisors--Massachusetts.

Video Oral History Interview with Sylvester James Gates, Jr., Section A2012_143_001_006, TRT: 6:30:56 ?

Sylvester Gates talks about his doctoral research in symmetry, entitled "Symmetry Principles in Selected Problems of Field Theory". During his time at MIT, his faculty advisors were not familiar with the subject, although certain experts existed in Europe. Despite that, Gates' describes his experience defending his thesis as empowering and positive. Gates talks about string theory, the difficulties with communicating theoretical science to the masses, how scientists use mathematics, human understanding of the universe, society's

skepticism towards science, the knowledge gap, and the limitations of science.
Oral examinations--Thesis (PhD).
String theory.
Science--Mathematics.
Science--Philosophy.
Religion and science.

Video Oral History Interview with Sylvester James Gates, Jr., Section A2012_143_001_007, TRT: 7:29:43 ?

Sylvester Gates received his Ph.D. degree in physics from the Massachusetts Institute of Technology in 1977. He then was appointed as a junior fellow in the Harvard Societies of Fellows at Harvard University. In 1980, Gates became a post-doctoral research fellow at the California Institute of Technology under Murray Gel-Mann and Richard Feynman. In 1982, he was appointed as assistant professor of applied mathematics at MIT. In 1984, Gates became an associate professor of physics at the University of Maryland, College Park. From 1990-1993, Gates served as chair of the physics department at Howard University. He returned to the University of Maryland, where he is the John S. Toll Professor of Physics. In 2009, he was appointed to serve on President Obama's Council of Advisors on Science and Technology. Gates talks about the state of STEM education in the United States as well as his hopes and concerns for the black community, and his family.

Harvard University. Society of Fellows.

Universities and colleges--Faculty.

Obama, Barack.

President's Council of Advisors on Science and Technology (U.S.)

Science--Technology--Engineering--Mathematics--Study and teaching--United States.

Video Oral History Interview with Sylvester James Gates, Jr., Section A2012_143_001_008, TRT: 8:20:23 ?

Sylvester Gates talks about his experience flying in Australia. He also reflects on his legacy, his life choices, and how he would like to be remembered. Finally, he describes his photographs.

Travel--Australia.

Photographs.