edited by DIANA PARSELL

TV Documentary Spotlights Minority Scientists

Journeying 3 days by train to a conference in Siberia, University of Maryland physics professor James Gates has many hours to explore the theoretical calculations that are the heart of his work. His area of concentration is supersymmetry, an element of "superstring theory," that posits no fundamental correlations exist for matter versus energy due to the spin of the elementary particles in the universe.

At one point, Gates gets a new idea, one he thinks could be a major link in his work. Tired after a night of deep contemplation, and with the sun coming up on the horizon, Gates talks about that insight and about science as a creative process, as a documentary film maker accompanying him captures the moment.

Gates is one of four physicists and astronomers featured in the first episode of "BreakThrough: The Changing Face of Science in America," a six-part series that will air in prime time on public television stations beginning 8 April.

"BreakThrough" profiles 20 African-American, Latino, and Native American scientists and engineers who are forging new ground in biology, astronomy, physics, mathematics, and other scientific disciplines. Each show has a theme that explores the special challenges confronting minorities who pursue careers in science.

The series was made by Blackside Inc., a Boston-based producer of documentaries including the award-winning "Eyes on the Prize" and "The Great Depression."

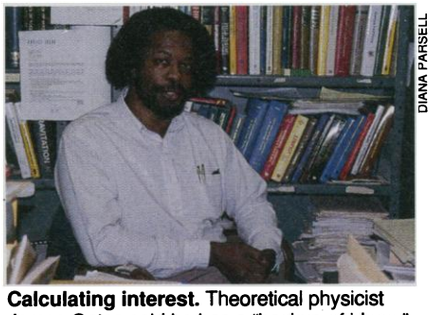
BREAKTHROUGH
The Changing Face of Science in America

To expand the impact of "BreakThrough," Blackside has worked closely with AAAS developing an extensive national outreach effort that will make related science education information available to viewers. It builds on formal and informal science education collaborations established by AAAS's Directorate for Education and Human Resources Programs. School, community, and science organizations in 32 areas around the country are participating, and premieres of the program will be held in several cities.

Viewers can access program descriptions, print materials, and information about science-related activities in their areas via the Internet at <http://www.blackside.com>.

Those without on-line access can tap into an information database by using a push-button phone to call a toll-free number: 1-800-BIG-BREAK.

The project won strong support from the Alfred P. Sloan Foundation, which provided a major grant for program planning and production. Additional program support and funding for outreach efforts came from the National Science Foundation and Intel Foundation.



DIANA PARSELL

Calculating interest. Theoretical physicist James Gates said he has a "backup of ideas."

Executive producer Joe Blatt said a major challenge was to capture the essence of the scientists' work in a short span. "You have to give up the pretense that you can cover everything. You need to find one strand that conveys the heart of the science while capturing the excitement."

For the segment on Gates, it happened serendipitously during the 1994 trip to Siberia. The train ride was his suggestion, inspired by his childhood interest in Russia and scenes in the film *Dr. Zhivago*.

Gates believes his "very rich fantasy life" as a young boy was an important factor in his becoming a theoretical physicist. "Mathematics had always been part of my imagination, consisting of rules that were made up," he recalled. Then, doing an incline plane experiment in high school physics, he had an epiphany. "Suddenly I realized that math represented something real. It broke down the barriers between the real and imagined worlds."

The ideas of supersymmetry have yet to be found experimentally, Gates noted. "But," he added, "I'm convinced Nature will find a way to use such a beautiful form of mathematics."

For more information, contact Judy Kass at AAAS, phone 202-326-6667 or by the Internet at: jkass@aaas.org. At Blackside, contact Jass Stewart, 617-536-6900 or: jass@blackside.com.

AAAS Fellow Nominations

Groups of three AAAS Fellows may nominate other AAAS members for election as Fellows. A Fellow is "a member whose contribution on behalf of the advancement of science or its applications are scientifically or socially distinguished." At least one of the three sponsors cannot be affiliated with the nominee's host institution. Election is by the AAAS Council.

Nominations must be received by 3 June. Forms are available from: AAAS Executive Office, 1333 H Street, NW, Washington, DC 20005; or call 202-326-6635.

The *Directory of AAAS Fellows* is available from: AAAS Distribution Center, P.O. Box 521, Annapolis Junction, MD 20701 ($14.95 for members, plus $4 handling and shipping, prepaid).

From Our History Files ...

The 1950s were years of widespread public interest in the nation's scientific and technological status. A group of state and civic leaders in Washington state set about to plan a World's Fair, "Century 21," that would emphasize future developments.

A major concern was making the U.S. science exhibit interesting and understandable to the general public. Would scientists offer guidance? The fair's organizers approached AAAS with a request for help.

Not only did AAAS organize a committee of scientific advisers, but as the U.S. government underwent a change of administration, the association lent a staff member, Edward Sherburne Jr., to the Commerce Department to serve as interim science coordinator of the U.S. Science Pavilion.

When the fair opened on 21 April 1962, the U.S. science exhibit was by far the most popular attraction. Reluctant to dismantle it when the fair closed, the Seattle sponsors reopened the exhibit as the Pacific Science Center. Today, the center offers a wide array of programs and interactive exhibits designed to increase the public's understanding of science, mathematics, and technology.

Source: *Renewing a Scientific Society: The American Association for the Advancement of Science from World War II to 1970*, by Dael Wolfle, 1989.

ERIN HOGAN