

Robert P. Moses

President and Founder
The Algebra Project, Inc.

Nominated by

Ronald S. Rochon

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July 31, 2008

Trent E. Gabert, Ph.D.
Chair, Brock International Prize in Education Executive Committee
1610 Asp Avenue, Ste. 108
Norman, OK 73072-6405

Dear Dr. Gabert,

It is with great enthusiasm and respect that I nominate Dr. Robert Moses, President and Founder of the Algebra Project, Inc. and Eminent Scholar at the Center for Urban Education & Innovation at Florida International University for the 2009 Brock International Prize in Education.

Robert Moses has an extensive and impressive history of organizing and facilitating progressive initiatives to facilitate more equitable and fair life experiences for underrepresented and underserved students and communities. Moses truly focuses on empowering and organizing communities and individuals. His work is founded on the concepts of directly involving families and stakeholders and working "at home" to build local movements led by local members who develop into local leaders. His efforts are particularly centered on those in need including the following:

- African Americans in Southeastern rural and urban areas;
- Latino/a and/or Mexican Americans in the Southwest and Western states;
- Rural European-American populations scattered across various parts of the country;
- Native American communities;
- Various minority and working class populations of the inner city of the major urban areas around the country.

Dr. Moses' commitment has been demonstrated through a life-long career of motivating and leading collective efforts. The brief narrative below indicates some of his key contributions and reasons that I feel he is worthy of this prestigious award. Moses' work and reputation span nearly 5 decades securing his reputation as a quiet force transforming lives and inspiring individuals.

Movements

Robert Moses is well-known as a pivotal organizer who advocated for the rights of African American in the early civil rights movement. His work as former director of the Student Non-Violent Coordinating Committee Mississippi Project and coordinator of the 1964 Freedom Summer voter registration program was key to enabling citizens in exercising their political power and collective voice. He believes in radical, direct-action, people-powered movements to improve people's living conditions and future opportunities and has dedicated his life to assessing needs and organizing action. Moses once defined 'radical' as "facing a system that does not lend itself to your needs and devising a means by which you can change that system." His work and legend demonstrate a leader determined to develop unifying forces that create and demand progressive change. But his nature reveals a man leading with quiet respect, careful thought, and steadfast commitment. His energy and

passion reinvigorate people to have hope in their communities, trust in themselves, and control of and aspirations for their future. One young Freedom Summer activist described Moses very astutely as the man he still is today—a “careful thinker (who) expresses himself with great economy and honesty, and with every word one is amazed at the amount of caring in the man.” It is the consistent caring and honesty displayed by Moses that makes him dynamic and trustworthy, leading and guiding others through authentic grassroots movements.

The Algebra Project

For several years Moses and his wife, Janet, taught mathematics in public schools in Tanzania. Moses comments that these years showed him very obviously what it meant “for a school system to be dedicated to its children,” and he was committed to bringing the same highly valued sentiments towards education back to the schools of struggling poor and people of color in America. In 1982 Robert Moses proved his dedication to education and children with the founding of The Algebra Project, a non-profit organization that uses mathematics to ensure a quality public education for every child. The Algebra Project began with Moses’ interest in improving his daughter’s probability of going to college. Moses ended up teaching his daughter as well as three other students during school hours and, that year, three members from Moses’ group became the first students in the history of the school to take and pass the citywide algebra test. From these humble, home-focused efforts, the Algebra Project was born. Ten years later the Algebra Project proved even more successful when 68% of the children enrolled in the Algebra Project in just one Boston school went onto ninth grade algebra compared to only 54% system-wide. The Algebra Project has since expanded from its home in Boston with four students to nationwide programming for over 10,000 children within schools in Chicago, Louisville, Milwaukee, Oakland, Atlanta, San Francisco, Los Angeles, New York City, the Mississippi Delta schools as well as New Orleans, Halifax, Jackson, Petersburg, Summerton, and Miami. It officially began with a grant from the MacArthur Foundation “Genius” Award and is now recognized and supported by the Lilly Foundation, National Science Foundation, Open Society Institute and many others.

Moses is committed to making it possible for students to be prepared and eligible for college math preparatory classes. His method is to convert the abstract language of mathematics into everyday language and practice emphasizing common experiences, reflection and query in order to transform a tangible experience to a mathematical statement. His curriculum is comprised of five steps: 1) physical events, 2) pictorial representation and modeling, 3) intuitive language/ “people talk,” 4) structured language/ “feature talk,” and 5) symbolic representation. Each step is formulated to assist students in a natural and non-threatening progression towards understanding complex algebraic and geometric theories and includes fieldtrips, questioning, art rendering and discovery.

The Algebra Project is much more than just math education. Its focus is to develop sustainable, student-centered models by unifying local stakeholders including schools, parents, and community members—particularly those from underserved populations. Through the Algebra Project Moses intends to change those attitudes that are deeply entrenched in our society and our policies that serve to disenfranchise rather than unite the people of our nation and beyond. His work has been successful in building and demanding support for quality public school programs—changing the general perception of who deserves and who is capable of succeeding academically. The Algebra Project utilizes a multi-pronged approach to bring about educational equity and access including: research and development, school development, partnerships, and community and site development—all of which are described in more detail within this collection of materials.

Satellite Projects

Moses is at the forefront of several decidedly influential and necessary initiatives that resulted from the success of the Algebra Project including the annual Algebra Project Conference (which engages youth and adult

participants in small and large group workshops focused on educational strategies—see <http://www2.jsums.edu/forms/algebraconference/>) as well as the Model of Educational Excellence (a collective effort to build a national network of schools and communities aimed to model quality math integration strategies). Moses also assisted in bringing about the Young People’s Project and the Campaign for Quality Public School as a Civil Right as described below.

In 1996 former students of the Algebra Project, including Moses’ own children, went on to develop the Young People’s Project, an initiative dedicated to organizing and empowering youth to effectively claim their right to a first-class education. The Young People’s Project (YPP) was founded on the belief that literacy, specifically mathematical literacy, is the “organization tool, comparable to the right to vote, for disenfranchised Blacks to determine their existence in today’s society.” YPP is an engaging and fresh effort utilizing the skills of many Algebra Project graduates to assist traditionally marginalized high school and college students in becoming literate and excited about mathematics. YPP students thrive in an environment that normalizes the process of learning math while helping youth break down and combat perceptions and stereotypes held by society about their inability or disinterest in educational success.

The Algebra Project is also at the forefront of the Quality Education as a Civil Right (QECR) initiative, launched in 2004. The goal of QECR is “to create a national dialogue about the enormous inequities in educational opportunities for the children and youth of our nation and, if possible, to create a groundswell of public opinion in support of a constitutional amendment guaranteeing a high-quality school experience to every American child.” QECR is committed to sustaining conversations at every level within our society to join together voices dedicated to guaranteeing high quality education for all children. This is a groundbreaking project successfully developing coalitions between institutions, individuals and communities. These coalitions work to enhance our understanding of crises face by students of color, seek to develop local strategies to face these issues, and call for a national campaign that addresses, resolves and enforces every child’s right to a quality education.

Moses: The Unifying Force

The heart and backbone of all of these projects and success stories is Dr. Robert P. Moses. Moses is not an individual serving as some distant, hard-to-reach executive administering his program from afar; but rather joins in the front lines. He continues to teach Algebra daily and can very easily be the person to greet visitors walking through the doors to the Algebra Project’s main office in Cambridge or within one of the many AP locations throughout the United States. He is a man who is dedicated, maintains a high level of energy, and is persistent in his pursuits to bring equality to our nation’s schools and our individual and collective attitudes and behaviors.

It is with great pride that I submit my nomination for this humble servant as the 2009 recipient of the Brock International Prize in Education. I look forward to meeting with you and our colleagues to further discuss the exceptional attributes and high-quality character of this “quiet giant.”

Sincerely,



Ronald S. Rochon, Ph.D.
Dean, School of Education &
Associate Vice President for Teacher Education

II. Biography

Robert P. (Bob) Moses resides in Miami, Florida, with his wife, Dr. Janet Moses, M.D. They have four children. Bob Moses was born and raised in Harlem, NY, and received his B.A. from Hamilton College in 1956. In 1957, he received a Masters Degree in Philosophy from Harvard University and he taught middle school mathematics at the Horace Mann School in New York City from 1958-1961. He has received numerous honorary doctoral degrees (see below).

During his young adult life, Dr. Moses was a pivotal organizer for the civil rights movement as a field secretary for the Student Non-Violent Coordinating Committee (SNCC), and was director of SNCC's Mississippi Project. He also served as Co-Director of the Council of Federated Organizations (COFO), a group that comprised all the major civil rights organizations working in Mississippi at the time. In that capacity, he was recognized as a driving force behind the Mississippi Summer Project of 1964 and in organizing the Mississippi Freedom Democratic Party (MFDP), which challenged the Mississippi regulars at the 1964 Democratic Convention in Atlantic City, NJ. From 1969-1976, he worked for the Ministry of Education in Tanzania, East Africa, where he was a teacher and chairperson of the math department at the Samé school.

Dr. Moses returned to Cambridge, MA in 1976 to pursue doctoral studies in Philosophy at Harvard University. A MacArthur Foundation Fellow from 1982 to 1987, Dr. Moses used his fellowship to work full-time teaching algebra to seventh and eighth graders in the Open Program of the Martin Luther King, Jr. Elementary School in Cambridge, MA. During that period, Dr. Moses founded the Algebra Project and began to carry it out together with concerned parents, teachers, educators and activists; the Project was incorporated in 1991. Bob Moses is the author of the *Algebra Project-Transition Curriculum*, which uses experiential learning drawn from the work of Dewey, Lewin, Piaget, Quine, and Kolb—and a five-step curricular process Moses innovated—to help middle school students make the conceptual shift from arithmetic to algebra and be prepared for algebra in the eighth grade, and thus a college preparatory math sequence in high school. These materials formed the backbone of Algebra Project teacher professional development and implementation throughout the USA during the 1990s, with a particular focus on the Southern U.S. From 1996-2006 Dr. Moses led the Algebra Project Math Lab at Lanier High School in Jackson, MS, teaching mathematics and following a cohort of students from middle school through college entrance.

Dr. Moses is founder and president of the Algebra Project Inc., and serves as director of the project's curriculum development program, while also teaching weekly algebra courses at Edison High School in Miami, Florida. Through a partnership with the Algebra Project Inc., Dr. Moses is currently serving as an Eminent Scholar at the Center for Urban Education & Innovation at Florida International University in Miami.

The Algebra Project's work has been supported by numerous generous grants from organizations such as the National Science Foundation, the Marguerite Casey Foundation, the Open Society Institute, The John D. & Catherine T. MacArthur Foundation, the Lilly Endowment Inc., the Tides Foundation-Community Development Fund, the Heron Foundation, the Edna McConnell Clark Foundation, the WK Kellogg Foundation, Working Assets™, the Annie E. Casey Foundation, the Walton Family Foundation, the Annenberg Rural Challenge, the Barr Foundation, the Arthur M. Blank Family Foundation, the Funding Exchange, the Poss Family Foundation, the Vanguard Public Foundation, as well as through direct service contracts with school districts and individual donations. The AP Inc. received a National Science Foundation award (2002-2006) for the development of selected experiential mathematics modules for previously under-represented populations (award # ESI-0137855). In July 2006, the National Science Foundation awarded the Algebra Project Inc a Short Term Grant for Education Research, #ESI-0600793, "Tracking Katrina: Algebra Project Instructional Materials Development Using Stories by Displaced New Orleans Students" (2006-08). In September 2006, the National Science Foundation awarded the Algebra Project Inc an Instructional Materials Development Grant #ESI-0628132, "Foundation for Mathematical Literacy: High School Materials Based on Mathematically-rich Experiences,

Professional Development and Community Involvement for Underserved Populations” (2006-09), for which Dr. Moses serves a Principal Investigator.

Dr. Moses has received several college and university honorary doctorate degrees and other honors, including the University of Colorado, School of Education John Dewey Prize for Progressive Education (2007), the Alphonse Fletcher Jr. Foundation Fellowship from Harvard University WEB DuBois Institute (2005), the McGraw-Hill prize in Education (2004), the James Conant Bryant Award from the Education Commission of the States (2002), the Mary Chase Smith Award for American Democracy from the National Association of Secretaries of State (2002), the Nation/Puffin Prize for Creative Citizenship (2001), and the Heinz Award for the Human Condition (2000). Dr. Moses’ life and the work of the Algebra Project has been chronicled in several historical accounts of the Civil Rights Movement and more recent national and local press—in print, radio and film.

Dr. Moses, with Charles E. Cobb, Jr., authored Radical Equations—Civil Rights from Mississippi to the Algebra Project (Beacon Press, 2001), which is in its fourth printing, has sold over 23,000 copies and also has won several awards. PBS’s *Now with Bill Moyers* featured Dr. Moses and the Algebra Project in Nov. 2002, and again with *David Brancaccio* in July 2007. Dr. Moses and the Algebra Project were featured in a May 7-10, 2006, *Raising the floor: Progress and setbacks in the struggle for quality mathematics education for all* workshop at the Mathematical Sciences Research Institute in Berkeley, CA. Dr. Moses has received honorary doctorate degrees from a variety of institutions, including Harvard University, Colby College, Middlebury College, Syracuse University, the University of Illinois Urbana-Champaign, Worcester Polytechnic Institute, Muhlenberg College, Princeton University, Hunter College and the University of Michigan, among others. Most recently, Dr. Moses is serving as a Frank H. T. Rhodes Class of 1956 Visiting Professor at Cornell University (2007 ongoing to 2011).

“The most important product of the Algebra Project ... continues to be the young students whom it serves. I think of the Project as working the demand side of the education conundrum that America faces. In the 60s, we were young and organizing an older generation to make appropriate demands on the country. In the year 2000 plus, we are older and organizing a younger generation to do the same. In those times, we organized Mississippi Sharecroppers around the right to vote and political access. In my mind, young black students in Mississippi and in most of the country who make demands to be educated follow in this organizing tradition. In these times, we organize Mathematics Literacy Workers around education and economic access.”

-Dr. Robert P. Moses

III. Curriculum Vita

EDUCATION

Doctoral candidate, Dept. of Philosophy, Harvard University, 1956-58; 1976-82

M.A., Philosophy, Harvard University, 1957

A.B., Philosophy & French, Hamilton College, NY, 1956

PROFESSIONAL EXPERIENCE

TEACHING:

1982-Present: Algebra Project Inc.; Founder, President, Curriculum Developer, Trainer

2006-Present: Teacher of Mathematics; Lanier High School, Jackson, MS

1996-2006: Teacher of Mathematics; Edison High School, Miami, FL

Fall 2003: Seminar Leader, *Reconceptualizing the Learning and Teaching of Algebra*; Harvard Graduate School of Education, Boston, MA

1969-1975: Chair, Math Department; Samé Secondary School, Ministry of Ed, Tanzania, Africa

1958-1961: Teacher, Middle School Mathematics; Horace Mann School, Riverdale, NY

COMMUNITY ORGANIZING:

1962-1965: Director, Student Non-Violent Coordinating Committee, Mississippi

1962-1965: Co-Director, Council Of Federated Organizations (COFO)

1961-1965: Field Secretary, Student Non-Violent Coordinating Committee (SNCC)

1964: Organizer, Mississippi Summer Project (Freedom Summer),

1963-1964: Organizer, Mississippi Freedom Democratic Party (MFDP)

CONSULTING & BOARD MEMBERSHIPS (SELECTED):

2004-Present: Member, Education Advisory Committee, Mathematical Sciences Research Institute

2004-Present: Eminent Scholar, Center for Urban Education & Innovation; Florida International University, Miami, FL (ongoing until 2009)

2004: Participant, National Summit on Closing the Achievement Gap, National Association of Black School Educators/Benjamin Banneker Association Alliance for Closing the Mathematics Achievement Gap

2003-Present: Member, National Academy of Education,

2001-2002: Member, Taskforce on Improving Middle Grades, New York City Board of Education

1991-1993: Member, Mathematics Council for the Equity 2000 Project, College Board, New York, NY

PUBLICATIONS (SELECTED)

- Moses, R.P. & Cobb, C.E. (2001). *Radical equations: Civil rights from Mississippi to the Algebra Project*. Boston: Beacon Press.

- O'Connor, M.C., Godfrey, L., & Moses, R.P. (1998). The missing data point: Negotiating purposes in classroom mathematics and science. In J. Green and S. Goldman (Eds.), *Thinking practices in mathematics and science learning*. Mahwah, NJ: Erlbaum.

- Moses, R.P. (1996, May 28). U.S. Pat. No. 5,520,542. *Games for enhancing mathematical understanding*. Cambridge, MA.

- Moses, R.P. (1989). *Algebra on the MBTA (Transition Curriculum)*. Sixth Ed. 1996, Cambridge, MA: Algebra Project Inc.

- Moses R.P., Kamii, M., Swap, S. & Howard, J. (1989). The Algebra Project: Organizing in the spirit of Ella. *Harvard Educational Review*, 59 (4). 23-443.

FELLOWSHIPS

- June 2005: Alphonse Fletcher Jr. Fdn. Fellowship, Harvard Univ. WEB DuBois Institute
1982-1987: MacArthur Fellow, John D. & Catherine T. MacArthur Foundation
1956-1957: John Hay Whitney Fellow
1952-1956: Full Scholarship, Hamilton College

GRANTS (SELECTED)

- Marguerite Casey Foundation, Core Support & Capacity Building, 03-06, renewed 06-09.
- National Science Foundation, IMD award # ESI-0137855, "The Development of Selected Experiential Algebra I Modules for Previously Under Served Populations," 02-05; Renewal award #0628132, "Foundation for Mathematical Literacy: High School Materials Based on Mathematically-rich Experiences, Professional Development and Community Involvement for Underserved Populations," 06-09.
- National Science Foundation SGER award #0600793, "Tracking Katrina: Algebra Project Instructional Materials Development Using Stories by Displaced New Orleans Students," 06-08.
- National Science Foundation, Teacher Enhancement award #9630116, "Middle School Intervention to Prepare All Students for Algebra," 96-01
- Open Society Institute/Soros Foundations, grant to the Algebra Project, 96-03
- National Science Foundation, Algebra Project in Mississippi for implementation and evaluation, 94-95
- The Lilly Endowment Inc. general support grant to the Algebra Project, 92-95
- MacArthur Foundation general support grant to the Algebra Project, 92-95

HONORS (RECENT/SELECTED)

- 2005-2007: Honorary Doctorates at Harvard University, Swarthmore College, Colby College, Williams College, Middlebury College, Syracuse University, Hunter College
- May 2007: John Dewey Prize in Education (inaugural award), U of Colorado-Boulder, School of Education
- June 2005: Alphonse Fletcher, Sr., Harvard Fellowship (inaugural awards)
- Sept. 2004: McGraw Hill Award in Education, New York City
- Aug. 2004: A Phillip Randolph/Bayard Rustin award, A Phillip Randolph Institute
- 2004: Honorary Doctorates at Princeton University, Muhlenberg College, Worcester Polytechnic Institute, University of Illinois at Urbana/Champaign, University of Michigan
- July 2002: James Bryant Conant Award, Education Commission of the States
- Feb. 2002: Mary Chase Smith Award, American Democracy, the National Association of Secretaries of State
- June 2001: Nation/Puffin Prize for Creative Citizenship
- June 2000: Heinz Award for the Human Condition

INVITED KEYNOTE & WORKSHOP PRESENTATIONS (2005-2007/SELECTED)

2005: Wesleyan University; Williams College; San Bernardino CA County Schools (38 districts); National Council of Supervisors of Mathematics; PMET/MAA: U of AL-Tuscaloosa, Clark-Atlanta University, Texas Southern U, U of Albuquerque; Quality Public School Education as a Civil Right, Howard University; Association of State Supervisors of Math. **2006:** UC Santa Cru; Western Michigan U; Hamilton College; Co-Organizer, Mathematical Sciences Research Institute, Education Workshop; U of Puget Sound; Panelist, National Academies of Science, Rising Above the Gathering Storm Report conference; U of Massachusetts-Amherst. **2007:** Alliances for Graduate Education in the Professoriate (AGEP), Martin L King, Jr. Address; Millersville U, Project Forward Leap; Cornell U, Frank H.T. Rhodes Visiting Professor Address; National Center for Culturally Responsive Educational Systems (NCCRESt) Conference; Columbia Graduate School of Journalism, Co-Organizer, Education & Journalism workshop; Carnegie Science Center, Pittsburg, PA; Los Angeles Unified School District Teacher Profession Development workshop; National Council of Teachers of Mathematics, Kansas City Regional; PBS "Dialogues in Democracy 2007," with Jim Lehrer, Williamsburg, VA.

IV. About The Algebra Project – Excerpts from the AP website

The Algebra Project, Inc.

99 Bishop Allen Drive

Cambridge, MA 02139

Tel: (617) 491-0200 – spoke with Becca 06/25

Fax: (617) 491-0499

Email: info@algebra.org

Dr. Robert P. Moses

President and Founder

In his young adult life, Dr. Moses was a pivotal organizer for the civil rights movement as field secretary for the Student Non-Violent Coordinating Committee (SNCC), and was director of SNCC's Mississippi Project. He was a driving force behind the Mississippi Summer Project of 1964 in organizing the Mississippi Freedom Democratic Party (MFDP), which challenged the Mississippi regulars at the 1964 Democratic Convention. From 1969-1976, he worked for the Ministry of Education in Tanzania, East Africa, where he was chairperson of the math department at the Samé school. Dr. Moses returned to the USA in 1976 to continue to pursue doctoral studies in Philosophy at Harvard. A MacArthur Foundation Fellow from 1982-87, Dr. Moses used his fellowship to develop the concept for the Algebra Project, wherein mathematics literacy in today's information age is as important to educational access and citizenship for inner city and rural poor middle and high school students as the right to vote was to political access and citizenship for sharecroppers and day laborers in Mississippi in the 1960s. As founder and president of the Algebra Project Inc., Dr. Moses also serves as director of the project's materials development program. See more at www.algebra.org. Together with Algebra Project Inc. board member Danny Glover, Moses and others recently launched a national discussion calling for an amendment to the U.S. Constitution for Quality Public School Education as a Civil Right; see more at www.qecr.org. Dr. Moses has received several college and university honorary degrees and honors, including the Heinz Award for the Human Condition and the Nation/Puffin Prize for Creative Citizenship.

The Algebra Project, Inc. is a 501 (c) (3) national, nonprofit organization that uses mathematics as an organizing tool to ensure quality public school education for every child in America. We believe that every child has a right to a quality education to succeed in this technology-based society and to exercise full citizenship. We achieve this by using best educational research and practices, and building coalitions to create systemic changes. The Algebra Project was founded in 1982 by a Harlem-born and Harvard-educated Civil Rights' leader, Dr. Robert P. Moses through the use of his MacArthur Fellowship award. Over the past two decades, AP grew from teaching math in one school in Cambridge, MA, to more than 200 middle schools across the country by the late 1990s, developing successful models of whole-school and community change. AP's unique approach to school reform intentionally develops sustainable, student-centered models by building coalitions of stakeholders within the local communities, particularly the historically underserved population. Since 2000, we have continued to provide the context in which students, schools, parents and communities maximize local resources and take ownership of their own community building and mathematics education reform efforts, which now include high school as well as middle grade initiatives. The civil rights work in the 1960s culminated in the national response to *protect* a fundamental right: the right to vote. Our current work seeks a national response to establish a fundamental right: the right of every child to a quality public school education.

The Algebra Project is passionate about strengthening communities and empowering youth to access full citizenship.

A. Algebra Project – History

The Algebra Project was founded in 1982 by a Harlem-born and Harvard-educated Civil Rights' leader, Dr. Robert P. Moses through the use of his MacArthur Fellowship award. Over the past two decades, AP grew from teaching math in one school in Cambridge, MA, to more than 200 middle schools across the country by the late 1990s, developing successful models of whole-school and community change. AP's unique approach to school reform intentionally develops sustainable, student-centered models by building coalitions of stakeholders within the local communities, particularly the historically underserved population. Since 2000, we have continued to provide the context in which students, schools, parents and communities maximize local resources and take ownership of their own community building and mathematics education reform efforts, which now include high school as well as middle grade initiatives. The civil rights work in the 1960s culminated in the national response to *protect* a fundamental right: the right to vote. Our current work seeks a national response to establish a fundamental right: the right of every child to a quality public school education.

B. Algebra Project – Programs

The Algebra Project works to change the deeply rooted social attitudes that encourage the disenfranchisement of a third of our nation's population. We deliver a multi-pronged approach to build demand for and support of quality public schools. They are:

Research and Development. The Algebra Project works with renowned mathematicians across the country to ensure our teachers and students learn content and instruction based on research and best practices. In October 2006, AP was awarded a three-year, National Science Foundation award to develop materials for Algebra I.

School Development. Our expert staff and team of consultants provide culturally sensitive, context-based, and site-specific professional development workshops to teachers. We augment intensive workshops with periodic follow-up workshops and classroom instructional evaluations. We work with school administrators to ensure that academic schedules create the time and space for teachers to reflect and share knowledge with one another. In FY2006, we trained over 100 teachers in six sites across the nation.

Partnerships. We value the strength of combining resources and knowledge through local and national partnerships. AP partners with local higher education and research institutions to develop effective teacher professional development, new teacher training, and teacher certification programs. In addition, we collaborate with the Young People's Project, an offshoot of AP, to include out-of-school time and engage students in their learning process. YPP uses mathematics literacy as a tool to develop young leaders and organizers who radically change the quality of education and quality of life in their communities so that all children have the opportunity to reach their full, human potential.

Community and Site Development. Led by Civil Rights veteran, David Dennis, Sr., AP combines lessons learned in the Civil Rights work with methods developed by university researchers, developing a system of support with local constituents. By working in an "organizing mode," after the Civil Rights' leader, Ella Baker, we help communities discuss, build consensus, and act on strategies that ensure critical assessment and implementation of developing a quality education system.

C. Algebra Project – Program Need and Population Served

During the last quarter of the 20th century, the US began to incorporate information technology into the workplace, introducing the Information Age and bringing us to our current Global and Knowledge Economy of the 21st century. This rapid transformation elevated the educational requirements for people to access economic opportunities to fully participate in their citizenship; it also prompted the country to introduce legislation that encouraged standards of “universally available schooling.” As a result, algebra has become a gatekeeper of higher learning, career, and economic opportunities.

America is lagging behind in the delivery of appropriate education for our youth to succeed in their “pursuit of happiness” guaranteed in the Constitution; not only are US students ranking lower in international academic performance reports, but worse, the student dropout rate is rising. These problems disproportionately impact low-income rural and urban youth, particularly African American, Native American, and Hispanic youth. According to the Urban Institute, 50% of African American 9th graders, 49% of Native Americans, and 47% of Latinos/as do not graduate from high school in four years. In some poor urban and rural schools, drop-out rates approach 80%. Of those who remain in school, nearly half of African American and more than half of Latino/a 12th graders test at below Basic on the National Assessment of Educational Progress. These students are more likely to be assigned the least qualified and most inexperienced teachers, and their schools are largely segregated and under-resourced.

Recent statistics from the U.S. Department of Education and the National Council on Crime and Delinquency, and reports from educational research across the nation reveal the alarming rates of overrepresentation of minority youth in special education and the juvenile court system. Minority students continue to be disproportionately labeled and “dumped” into non-inclusive, special education classes, carrying the stigma of this label throughout their entire education and often adult life. In 2000, some 3.9 million children, or 8 percent of those enrolled in public elementary and secondary schools, were classified as having mental retardation, an emotional disturbance, or a specific learning disability. In an analysis of this population, African American females were twice as likely to be classified as Mentally Retarded, and African American males three times more likely than white students.

In mathematics, the Program for International Student Assessment (PISA) reported in 2005 that U.S. 15-year-olds, on average, scored below the international average for participating OECD (Organization for Economic Cooperation and Development) industrialized countries in combined mathematics literacy, specific mathematics skill areas, and problem solving (US ranked 24th out of 40 countries). In 1999, teachers without a degree or certification in the subject instructed 68% of 8th grade students in mathematics. Reports released by the National Center for Education and Economy and by the National Institutes, urge the government to seriously address the declining quality in American education that prevent graduates from competing in the global market.

For over 24 years, the Algebra Project has been on the frontlines of the struggle for educational equity and access for our nation’s youth and families. We stand on the shoulders of our ancestors who demanded and won voting rights for all Americans. In the same way, we now work to empower students to demand quality education by first committing themselves to the fact that they can and will successfully learn mathematics. We recognize that in order for students to realize their full potential, communities and schools must create an environment that supports students in their effort. AP’s support to create such an environment is the cornerstone of our nationally acclaimed models of education service delivery.

During the 2006 and 2007 school year, the Algebra Project implementation and development sites include: Yuma, AZ; New Orleans, LA; Halifax County, NC; Orangeburg, SC; Jackson, MS; Petersburg, VA; Harlem, NY; Summerton, SC; Ithaca, NY; Springfield, MA. These sites are comprised of predominantly low-income, African American, Latino/a, and white families.

D. Algebra Project – National Partners

The Young Peoples' Project, Inc.

- Key outcome of Algebra Project organizing mode of operations since 1980s
- Recruits, trains and deploys high school- and college-age Math Literacy Workers
- Collaborate on National Science Foundation Informal Education Award to conceptualize and implement a national Flagway Campaign, increasing mathematical understanding among young people

Mathematical Sciences Research Institute/Park City Mathematical Institute

- Collaborate on May 2006 "Raising the Floor" conference and various workshops
- Bob Moses serves on K-12 Education Advisory Committee

University of Michigan, College of Education – Dean Deborah L. Ball, Hyman Bass et al.

- Collaborate on building a national coalition of schools, institutions and students, who are actively pursuing a constitutional amendment for the federal right to quality education

Center for Urban Education & Innovation at Florida International University, College of Education – Directed by Dr. Lisa Delpit, Associate Director Dr. Joan Wynne

- Multiyear contractual relationship for Algebra Project site development in the Miami area
- Miami-Dade Public Schools: Edison High School
- Collaborate on national education policy initiatives
- Bob Moses serves as Eminent Scholar, 2006-2009

Industrial Areas Foundation – Directed by Ernesto Cortes Jr.

Sacramento Valley Organizing Committee – Lead Organizer Ken Fujimoto

- Exploring Algebra Project implementation in Southwest Region IAF sites
- Collaborate on national education policy initiatives

Hay Group, McClelland Center for Research and Innovation – Jim Burruss

- Facilitate Algebra Project Professional Development program design

Columbia Graduate School of Journalism – Dean Nicholas Lemann and Associate Dean Arlene Morgan

- Developing symposia on media coverage of issues related to quality public school education

Quality Education as a Civil Right

- Initiative launched by the Algebra Project in September 2004 in New Orleans focused on making the demand for quality education for all America's children, especially students and schools performing in the bottom quartile
- Convened 1st major working meeting in March 2005 at Howard University; currently retooling post-Katrina for national outreach

Xavier University: New Orleans, LA

Dryades YMCA, Singleton Charter School: New Orleans, LA

Crescent City Peace Alliance/Urban Heart: New Orleans, LA

Cornell University Mathematics Department – Dr. David Henderson

- Bob Moses serves as Frank H. T. Rhodes Class of '56 Visiting Professor, 2007-2011

Frank H. T. Rhodes Class of '56 Visiting Professor

Students At the Center

- Collaborate on Algebra Project National Science Foundation Short-term Grant for Educational Research award

Inverness Research Association

- External Project Evaluation for Algebra Project National Science Foundation Instructional Materials Development award

Jackson State University

- RSD of LA: Professional Community development in Louisiana.
- PPS and Cameron

E. Algebra Project – Supporters

National Science Foundation
Marguerite Casey Foundation
Ford Foundation
Tides Foundation
Charles Evans Hughes Memorial Foundation
Community Investments Fund of Tides Foundation
Northern Trust, Barksdale Reading Institute
Cambridgeside Galleria
Carpenters Local Union No. 40
Meyer and Friedman Fund of the Friedman Family
Foundation

Full Circle Foundation
Claire Giannini Fund
I Do Foundation
JKW Foundation
Jewish Communal Fund
McAdams Foundation
Monadnock Community Foundation/New
Hampshire Charitable Fund
Off the Record, Music Services,
Rachel Cowen Fund
Toomey Committee

V. Letters of Support

Lisa Delpit, Professor, College of Education, Florida International University
Association: National Partner, Center for Urban Education & Innovation

Peter Blair Henry, Professor, Graduate School of Business, Stanford University
Association: Board Member, Young People's Project

Nicholas Lemann, Dean, Graduate School of Journalism, Columbia University
Association: National Partner, Columbia University Graduate School of Journalism

Deborah Loewenberg Ball, Dean, School of Education University of Michigan
Association: National Partner, University of Michigan School of Education

Chad Milner, Site Director, The Young People's Project, Greater Boston
Association: Staff, The Young People's Project

Khari Milner, Director, Cambridge Public School & Out-of-School-Time Partnership
Association: Board Member, The Algebra Project and Co-Founder, The Young People's Project

Jessy Molina, National Coordinator, Quality Education as a Constitutional Right
Association: Board Member, Young People's Project

Arlene Morgan, Associate Dean, Graduate School of Journalism, Columbia University
National Partner, Columbia University Graduate School of Journalism

Joan Wynne, Professor, Urban Education, Florida International University
Association: National Partner, Center for Urban Education & Innovation

July 22, 2008

Ronald S. Rochon, Ph.D.
Buffalo State College
Buffalo, NY 14222

Dear Sir:

I am writing to recommend Dr. Robert P. Moses for the 2009 Brock International Prize in Education. I have known Bob for almost twenty years. In that time my admiration for him has grown exponentially from first learning of his role as a living Civil Rights legend to seeing up-close his work as the founder and president of the Algebra Project, Inc. Since 2003, I have worked with him as an Eminent Scholar at our Center for Urban Education & Innovation (CUEI). In that capacity, he has created an accelerated learning model for a cohort of disenfranchised children right here in Miami, the fourth largest school system in the nation. Watching him work with these students from the lowest quartile of academic achievement in one of the lowest performing schools in the district has been pure joy. These young people have mastered and taught to peers and younger students complex mathematical abstractions which they could not have imagined themselves capable of understanding just a few months ago.

In a college setting, Bob is truly an anomaly. He is a scholar and deep thinker who resists staying within the walls of the university. He insists on spending 90 minutes a day, five days a week, nine months a year teaching mathematics to a cohort of 9th through 12th graders in a low-functioning, local high school. In addition, along with the CUEI, Bob helped create a complex coalition of university personnel, college of education mathematicians, researchers from other disciplines, community leaders, local foundations and businesses, Miami Dade County Public School personnel, graduate students, parents, high school students, and many others to build a new kind of partnership that takes the university directly into the community. This extended collaboration is an attempt to create school-based, university-affiliated school reform, where the accountability of the reform rests upon producing high academic achievement for underprepared high school students, with the ultimate result that students are capable of "standing on their own two feet" in college. In the 1990s, Bob accomplished this with students in Jackson, Mississippi, and he is now beginning his third year with a cohort of Miami high school students.

What's different from the Mississippi cohort experiment, however, is that in the CUEI/Algebra Project reform effort, the university comes to the school house. Bob, professors, researchers, graduate students, and CUEI partners work in the classroom with the students, alongside the high school teacher. Theories, curriculum, and pedagogy designed to propel students much beyond typical district standards are worked out inside the high school classroom with the students. Our university, under Bob's leadership, has left its "ivory tower" and become intimately involved with its real constituents, testing knowledge, shaping and re-shaping its visions of reality to consciously contribute to the public good. Bob's visionary thinking consistently propels this effort toward more "student-centered" success. The commitment, dedication, passion, and cutting edge philosophy and pedagogy that Bob brings to his work with students and their communities is nothing short of inspirational. His impact on public policy through his work in reshaping the vision of university and school house relationships is profound and is pushing the frontiers of institutional thinking. I can think of no other educator who is more deserving of the Brock International Prize in Education for long term effects on local, national and international communities. Bob has been a national treasure for over 40 years as a formidable change agent for democratic reform and for the last 25 years as an innovative giant in educational reform for America's disenfranchised.

Sincerely,
Lisa D. Delpit

Center for Urban Education & Innovation
University Park, ZFB 338 – Miami, FL 33199 – Tel: (305) 348-6463 – Fax: (305) 348-6465 – www.fiu.edu/urbaned

GRADUATE SCHOOL OF BUSINESS, STANFORD UNIVERSITY
518 MEMORIAL WAY, STANFORD, CA 94305-5015

PETER BLAIR HENRY
KONOSUKE MATSUHITA PROFESSOR OF INTERNATIONAL ECONOMICS

24 July 2008

Dear Selection Committee:

I give Dr. Robert P. Moses my strongest possible endorsement for the 2009 Brock International Prize in Education.

I have known Bob since July of 1993. After reading about his work with the Algebra Project while I was studying mathematics at Oxford, I decided that I wanted to help. During my first week back on American soil, I walked into the Cambridge, Massachusetts offices of the Algebra Project Incorporated to offer my services. Bob happened to be in the office at the time, grilled me for about an hour, and offered me a volunteer position on the spot.

Since that eventful day over fifteen years ago, I have had many opportunities to witness the power of Bob Moses and the Algebra Project at work, giving me a long list of reasons why I think Bob deserves this prize. Since I don't have time to go through all of the reasons in this letter, let me focus on the one which I think is most important: Bob's work at the Algebra Project has the capacity to make a significant dent in income inequality and improve the productive capacity of the U.S. work force.

Income inequality in the United States is a source of concern to many citizens. The ratio of the average wage of skilled workers to unskilled workers continues to grow, and while there are many competing explanations, most economists believe that a rapid increase in the demand for skilled workers is the principal cause.

One way of addressing income inequality is through legislation such as a higher minimum wage. Even putting aside efficiency considerations—increasing the minimum wage might lead to more unemployment—the problem with such an approach is that it does not have the potential to improve living standards on a large scale.

Improving the skill-level of the US workforce provides a more promising way forward. A recent article in the *Journal of Economic Literature* suggests that high school graduates in the United States are less well educated than high school graduates in many OECD countries, with math and science being an area of particularly strong deficiency. This is exactly the margin on which Bob's work continues to play a critical role. By improving the quality of math instruction, and by raising students' expectations of themselves, Bob

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E-MAIL: pbhenry@stanford.edu

Moses and the Algebra Project are slowly but surely changing the culture and helping to increase the quality of math education—especially among the demographic groups that will constitute an increasingly large fraction of our future labor force.

For his pioneering work in math education, Bob Moses deserves the Brock Prize. I can think of no work more important to the future well-being of American society.

Sincerely,

A handwritten signature in black ink, appearing to read "Peter Blair Henry". The signature is stylized with a large, sweeping flourish at the end.

Peter Blair Henry

July 28, 2008

Ronald S. Rochon, Ph.D.
Dean, School of Education
Buffalo State College
Buffalo, NY 14222

Dear Dr. Rochon,

I am writing in support of your nomination of Robert Moses for the Brock International Prize in Education.

Bob Moses is a legendary figure, and deservedly so. In the early 1960s, as a young mathematician and teacher, he went to Mississippi to organize African-Americans to vote. It's easy to forget what an impossible task this seemed to be at the time. Black Southerners quickly became one of the country's most politically empowered constituencies during the brief flourishing of "radical Reconstruction" in the early 1870s. That ended through a campaign of political terror that was followed by legal barriers to blacks' voting that were embedded in the constitutions of the former Confederate states. The connection between political activity and physical peril could not have been clearer from 1875 until the passage of the Voting Rights Act in 1965. It took a great deal of courage for a young New Yorker like Moses, and others like him, to go to the most dangerous parts of the South to take this project on. Neither was Moses—a small, shy person who often leads a meeting by simply standing at a podium and not saying anything—the type of person one would expect to lead the fight to overcome this most apparently insuperable of political barriers. He has an almost magical sense of where to turn up, what to work on, whom to talk to, and how to inspire.

Moses was one of the few leading figures of the civil rights movement not to be consumed by the movement's bitter late-stage internal struggles. Instead he moved to Africa and played a vital part in the early period of independence in Tanzania, then returned to the United States and, after a few years, founded the Algebra Project, an effort based on the idea that numeracy is a form of empowerment for the disadvantaged just as important as voting rights. He has doggedly built up that project for a quarter-century, even though school systems are resistant to change and "algebra" is not a word that automatically leads to political action. In recent years, Moses, in his mid-70s, has begun to work on the connection between education and citizenship in a way that is every bit as improbably ambitious as his early work in Mississippi. The U.S. Constitution says nothing about education; Moses believes it should be amended to guarantee an education to every citizen. This is a simple, dramatic, powerful idea, and it would change American life profoundly in the direction of providing everyone with genuine opportunity.

I'll end on a personal note: Bob Moses is a man of rare integrity, modesty, and acuity. I cannot think of anyone at his level of achievement who has anything close to his almost saintly humility, and I also cannot think of anyone who can see as well as him to the core of American society and detect issues that are important but not obvious. I feel lucky to be his friend and professional colleague. The Brock Prize would mean a lot to him, and it would be richly deserved.

Sincerely,

Nicholas Lemann
Henry R. Luce Professor and Dean
Columbia University Graduate School of Journalism

DEBORAH LOEWENBERG BALL
DEAN AND WILLIAM H. PAYNE COLLEGIATE PROFESSOR

UNIVERSITY OF MICHIGAN

SCHOOL OF EDUCATION

610 E. UNIVERSITY AVENUE, SUITE 1110
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734 764-9470 FAX: 734 764-3473
dhl@umich.edu

July 21, 2008

Ronald S. Rochon, Ph. D.
Dean, School of Education
Associate Vice President for Teacher Education
Buffalo State—State University of New York
1300 Elmwood Avenue, CAUD 114
Buffalo, NY 14222

Dear Dean Rochon:

I am deeply honored to support your nomination of Dr. Robert Moses for the 2009 Brock International Prize in Education. I consider Dr. Moses to be a rare mentor and teacher—one with such integrity that his life *is* his teaching. Dr. Moses is not only the inspiration and driving force behind the nationally known Algebra Project, now in its twenty-fifth year, but he is a living icon of the Civil Rights Movement, a man who has sustained his quest for justice over the course of his entire adult life, first as one of the principal architects of the Mississippi Freedom Summer, and currently, as a force behind Quality Education as a Constitutional Right, a grass roots movement involving community organizers, classroom teachers, academics, and youth. In addition, his children, Omo and Maisha Moses, have founded an initiative complementary to the Algebra Project, known as the Young People's Project, which is aimed at organizing youth to become Math Literacy Workers—a testament in its own right to Dr. Moses' powerful influence and legacy.

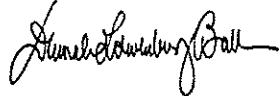
For the past quarter century, Bob Moses has poured his energies and intellect into the Algebra Project, which now reaches nearly 40,000 students across the nation. He defines the Algebra Project as "a national mathematics literacy effort aimed at helping low income students and students of color—particularly African American students—successfully achieve mathematical skills that are a prerequisite for full citizenship in the Information Age." It took a person with Bob Moses' unique configuration of experiences and passions—a Harvard education in philosophy and mathematics, years organizing Mississippi sharecroppers to seek voting rights, a stint teaching in Tanzania—to grasp that mathematics could be an organizing tool. It took Bob Moses to see that in the United States, algebra courses are a gateway—to college, to well-paying work—through which far too many low-income youth do not pass.

First in collaboration with his own daughter's teachers, including Lynne Godfrey, currently a teacher-consultant with the Project, and now, in collaboration with teams of mathematicians, mathematics educators, and classroom teachers, Bob Moses is carefully developing an experiential pedagogy for teaching mathematics. In concert with others, he continues to pilot the curricular materials, to document results, and to convince local communities of parents, teachers, and administrators that they must concretely and tangibly raise up all of their children to college-readiness.

Although I first met Dr. Moses through the Mathematical Sciences Research Institute at Berkeley, with which we are both associated, he is now a member of the University of Michigan School of Education Dean's Advisory Council. I so value his perspective that I asked him to help influence my work here as dean of a school of education committed to the improvement of education for all students. Perhaps more significantly, he has persuaded my University of Michigan colleagues and me—and many others in the Metropolitan Detroit region—to join him in establishing an Algebra Project cohort, one of at least four across the country. He proposes that we focus on a group of 20 students, from the lowest quartile of a ninth grade class, and take them through high school, school years and summers, doing whatever it takes to bring them to college-readiness. He believes that, if fifty or one hundred groups across the nation do this, a new conversation about public education can be opened, one that asks, "Why don't we create an educational system that values each and every child?"

Dr. Robert Moses is eminently deserving of the Brock International Prize in Education. While his work in education has largely taken place in the United States, a profound global understanding shapes his vision, and the effects of his ongoing quest for equity and access have worldwide significance.

Sincerely,

A handwritten signature in cursive script, appearing to read "Deborah Loewenberg Ball".

Deborah Loewenberg Ball
Dean, School of Education
William H. Payne Collegiate Professor in Education



The Young People's Project

99 Bishop Allen Drive
Cambridge, MA 02139
617-350-8991 PHONE
617-350-8997 FAX

July 22, 2008

To Whom It May Concern:

I have worked with and been affected by the work of Bob Moses for the last fifteen years. I was a middle school student at the King Open School in Cambridge, MA, during the early years of the Algebra Project. It was during this time that Bob came to our class and proposed the idea of having ALL kids prepare for the Algebra exam in order to gain access to college ready math.

Since my time as an Algebra Project student, I successfully passed my Algebra exam at the end of my eight grade year, went on to tutor younger students in my community during my high school years, attended Stanford University and am now actively serving as the Site Director for the Greater Boston site of the Young People's Project. Through his work he has positively affected the lives of thousands of young people nationwide in the critical area of mathematics literacy. It is with great honor that I recommend that Bob's extraordinary work be recognized by an award from the Brock International Prize in Education. I thank you in advance for your time and consideration in this matter

Sincerely,

Chad Milner
Site Director
Greater Boston

Building
Demand
for
Math
Literacy
www.typp.org



Mr. Khari Milner
Director, Cambridge Public School &
Out-of-School-Time Partnership
159 Thorndike Street
Cambridge, MA 02141

July 25, 2008

To Whom It May Concern:

I am writing this letter to pledge my full support behind Dr. Robert P. Moses towards his nomination for the 2009 Brock International Prize in Education. It is my humble belief that Dr. Moses, or "Bob" as I have called him since I was seven years-old, has single-handily helped to mold and progress the United States educational landscape since he began working in seventh and eighth grade classrooms in Cambridge, Massachusetts. His early work has led to curriculum houses, researchers, school districts and academics to re-assess how math is taught; and teachers teaching and students learning Algebra I is now the expectation in every seventh and eighth grade classroom across the nation.

It began in 1982, when Bob arranged to teach Algebra I in his daughter, Maisha's, classroom because the course was not being offered. He deduced that this would mean she would be denied a chance to take honors level math and science classes when she enrolled in high school the following year. He also soon realized that the students were being segregated in her class, and as he discovered across the district, into lower and upper level math classes along the lines of class and race. These inequities and certain students' lack of access to imperative gateways moved and inspired Bob to create the Algebra Project.

Several years later, when Bob's oldest son, Omowale, and I passed the citywide Algebra exam as eighth graders, we were able to enroll into honors level Geometry and Biology courses in the fall of 1986 which led to each of us attending nationally ranked four-year colleges. More importantly, we learned to have high standards for ourselves and to demand for access to challenging high-level academic work. These values set the foundation for Omo, his younger brother Taba, and I to eventually found the Young People's Project (YPP; www.typp.org) along with middle school students in Jackson, Mississippi, in 1996. Today YPP uses math literacy as an youth and community empowerment tool with thousands of middle, high and university students across the country. It was also during my time in Jackson when I began to serve on the Algebra Project Board of Directors as a "youth" representative. I continue to sit on the Board of AP to this day, and I am entering my third year as Vice-Chairperson.

To Learn or Share More: Cambridge Public School & Out-of-School-Time Partnership
617-349-6553, kmilner@cpsd.us

Today the Algebra Project continues its legacy of viewing math literacy as catalyst towards more empowered, engaged and educated citizens. Similar to how the Civil Rights Movement chipped away at the caste system associated with social, financial and political access, the Algebra Project sees its work as doing the same through the framework of the public education system. It is AP's belief that when given an opportunity to work with the lowest quartile of our country's students on a consistent basis for at least four consecutive years, our students will begin to demonstrate their potential more fully and be able to contribute as learners, thinkers and positive community members.

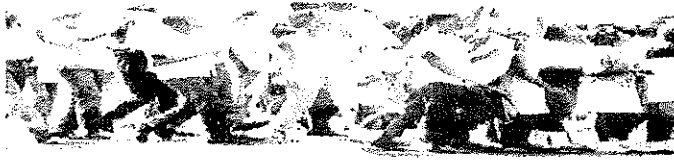
Similar to how Bob and AP have helped to make Algebra I the national "standard" for seventh and eighth grade curriculum, Bob's visions continue to "raise the floor" and provide a space where learners, teachers and all citizens can demand that our nation's public education system fulfills its rightful purpose: to provide a quality education to every American student without exception.

I hope that you consider Dr. Moses for your prestigious honor; he is unquestionably worthy.

Respectfully submitted,

K.J.M.

Khari J. Milner, Ed. M.



Dean Ronald S. Rochon, Ph.D.
Dean, School of Education & Associate Vice President for Teacher Education
1300 Elmwood Avenue
Caudell Hall 114
Buffalo, NY 14222-1095

Dear Dean Rochon,

It is with great pleasure that I recommend Dr. Robert Moses for the 2009 Brock International Prize in Education. For the last 25 years, Dr. Moses has tirelessly brought the Algebra Project to communities across the nation, and in doing so has supported thousands of students, parents, teachers, administrators and community leaders in transforming the American public education system. In addition, Dr. Moses' work with the Algebra Project has inspired several other organizations with far-reaching impact, including the Young People's Project and Quality Education as a Constitutional Right.

Dr. Moses has always been dedicated to the children that our public education system had long disregarded: the children in prison, and the children of prisoners, the children of laborers, the landless and the jobless, and the children of sharecroppers, whether in the Mississippi Delta or a Cambridge housing project in the shadow of Harvard University. He is committed to the education of the "bottom quartile" of the nation, and in showing the country that these children, given the right support and tools, can become proficient and show mastery of the most intricate and complicated mathematical concepts.

Dr. Moses has succeeded time and time again in showing the nation that the "unteachable" children, the "dysfunctional" children, the black and brown and poor, can be mathematical masters. Moreover, they become masters by supporting one another's learning. The Algebra Project methodology requires children not only to take responsibility for their own education but that of their peers. By all measures, state tests, national tests, student and parent reporting, and teacher assessment, Dr. Moses has created a program that helps all students learn Calculus in their senior year, no matter what their background.

Dr. Moses energy, passion, and commitment are awe-inspiring. When I was an intern with the Young People's Project in Jackson, Mississippi as a Harvard undergraduate, Dr. Moses graciously allowed me to live in his home. Local students also used his home as a meeting place and a refuge when their own family situations became difficult. As an intern, I went to work at the local middle school at 7:30am and returned after after-school programs and evening sessions at 9:45pm. Dr. Moses always left the house for school in morning before me and returned after me. There is no limit to the time he would spend with students and in working to refine and perfect his teaching model.

Dr. Moses has extremely high expectations for all he works with, from students to teachers to administrators, and political leaders. He is committed to working in a way that includes all voices, and in developing solutions to big problems collectively. This takes time, effort, patience, and a grace that Dr. Moses embodies. He is a gentle and courageous spirit, an unrelenting force for justice, and a man who has worked behind the scenes for decades in order to privilege the voices of the voiceless. He has transformed education in America. His vision

The Journalism School
Columbia University

July 30, 2009

Dear Dr. Rochon:

It is a privilege for me to second your nomination of Dr. Robert Moses for the 2009 Brock International Prize in Education.

I have long admired Dr. Moses for his innovative work with the Algebra Project but did not come to know him until November 2006 when he lectured at the Graduate School of Journalism during the launch of a new scholarship program, named for the late Andrew Goodman, on writing about diversity.

At the time we were hosting a continuing education workshop on the reported education gaps between boys and girl – a gap that clearly is more pronounced within the African American and Latino male communities and their white counterparts. Dr. Moses influenced me to become involved with a reform movement about how to educate journalists who seek to cover education as well as improving the current level of coverage we see, especially in urban areas.

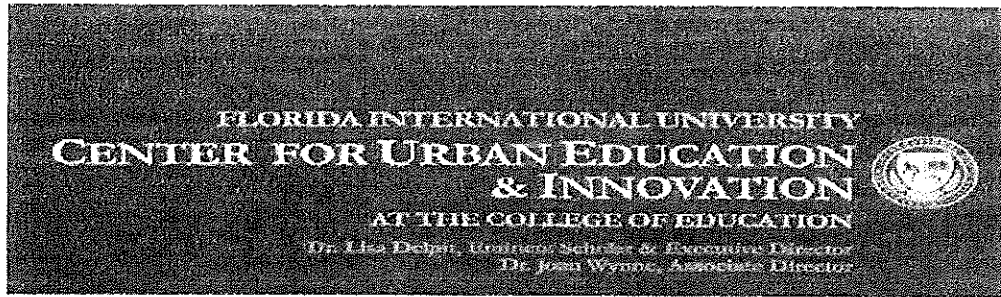
We have worked with Dr. Moses and members of the Algebra Project on a joint proposal that now involves Columbia's Teachers College, the national Association of Education Writers and the Fred Friendly lecture and case study initiative to launch a series of workshops and curriculum reforms that would help journalism professionals and students to report through a social health index lens regarding the failures and best practices in education. In cities like Milwaukee, Los Angeles, Detroit, Philadelphia, New York and Baltimore, there are persistent and alarming dropout rates that indicate how plenty of minority children are being left behind despite the good intentions of the No Child Left Behind Act. Dr. Moses has long been a champion for those children and urged the school to take on this issue because of our role as a leader in journalism education.

Since joining the Columbia staff in 2000 after a 31-year career at the Philadelphia Inquirer, I have met a number of leaders and celebrities, including former President Clinton and First Lady Rosalyn Carter, who have helped us think through what journalists are missing on the coverage of Aids and mental health. But no one has had a greater impact than Dr. Moses in influencing the type of change that is required if we are to truly educate all of America's children. A major voice for the under-served throughout his life, Dr. Moses is a leader without peer. His current quest for an adoption of a constitutional amendment that would guarantee an equal education as a right for every child has inspired educators and journalists to think outside of the boundaries of what can be achieved in the area of civil rights.

I am honored to support this award for Dr. Moses and be counted among those whose life he touched and changed.

Sincerely,

Arlene Morgan,
Associate Dean, The Graduate School of Journalism, Columbia University



July 22, 2008

Tamara H. Horstman-Riphahn
Executive Assistant to the Dean
School of Education, Caudell Hall 114
Buffalo State College
1300 Elmwood Avenue
Buffalo, New York 14222

Dear Ms. Horstman-Riphahn:

I am writing to highly recommend Bob Moses as a recipient of the Brock International Prize in Education. To be quite honest, Bob is one of my favorite American Heroes. His life-long courage and determination in the struggle for equal justice and equal education for all Americans in the face of great adversity fills me with awe. I had known of Bob's legendary work in the Southern Freedom Movement for many years, but it was only in 1995 while I was teaching at Morehouse College, that I discovered his brilliance in the struggle for educational excellence for children living in poverty.

Three years later, I brought seven of my graduate students from Georgia State University to visit Bob at Lanier High School in Mississippi to observe his Algebra Project work with students. I had heard of his successes with these children left at the bottom of school performance, and I wanted my students and me to see first-hand how he accomplished these small miracles.

When my students and I listened to the presentations of 25 African American, rural youth who, before their exposure to the Algebra Project, had been the forgotten children of the Mississippi poor, we were swept away by the students' ability to articulate and explain mathematical concepts that were, frankly, beyond our grasp.

After that initial visit, I knew that I had to learn more about this man, his educational philosophy, his pedagogy, and his commitment to grassroots organizing. I was hoping at that time to find a way to re-create something similar in Atlanta, Georgia for our urban poor. Though I was unable to create it in Atlanta, I did not forget the experience. Therefore, when I arrived in Miami at Florida International University with Dr. Lisa Delpit, who had earlier served on the Algebra Project Board, she and I began serious negotiations to bring Bob Moses to Miami to co-create an Algebra Project site in our troubled city. That venture has been the most successful collaboration that we at the Center for Urban Education & Innovation at FIU have sustained.

A year after Bob came, he also introduced the Center to the Young People's Project which is an organization where the young teach, mentor, and organize the young to promote mathematical literacy and competence, and which is a spin-off of the original Algebra Project. That program, too, has been a serious contribution to our work in Miami.

Quite candidly, Bob is the hardest working, committed, cutting-edge educational thinker that I have ever worked alongside. His energy for delving deep into the complexity of educational and social issues facing the urban poor is simply staggering. His insightful nature continually allows us to examine our practices and theories in useful and productive ways. And his patience in guiding this journey for the growth of not only students but also his colleagues adds a new and fuller dimension to the concept of mentoring.

Through his reputation and that of Lisa Delpit's, we have been able to attract a number of research grants to evaluate the successes and challenges of the work here in Miami. Several papers have been published as a result of that work.

I know that your prize is dedicated to innovation and public impact, and I also know that in my thirty years of experience in education, I have never met anyone who demonstrates those qualities and results better than Dr. Moses. He is a beacon in a public arena where the light of intellectual rigor and imagination is often hidden from people of color and from people living in poverty.

Moreover, through his imagination, wisdom, and experience in teaching the young and organizing the elders, he has stirred a national movement toward bringing that light to educational reform. His call to the nation over three years ago to advance a national agenda for Quality Education as a Constitutional Right has been amplified across the country and across the arenas of education, law, and public and social policy.

Bob's luminous history and his profound intellectual and personal integrity are continuing to lead this nation toward its original dream of a lived democracy. I applaud your efforts to bring his gifts to a larger public.

Sincerely,

Joan Wynne

Joan T. Wynne
Professor/Urban Education
Associate Director, Center for Urban Education & Innovation

VI. Related Articles and Publicity

Teacher Hero: Robert Moses by Margaret Dean

Goodman, A. (Host, Executive Producer). (2001, January 12). Danny Glover, Robert Moses and David Dennis talk about the "Algebra Project". *Democracy Now! The War & Peace Report* [news program]. New York: Pacifica. (transcript not included)

Feeney, M. (2001, March 8). The sum of Robert Moses: Algebra Project founder sees education as the new civil rights struggle. *The Boston Globe*, p.D01.

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Hoff, D.J. (2001, March 28). Civil rights campaign evolves into Algebra crusade. *Education Week*, 20(28), 14.

Hoff, D.J. (2001, March 28). Algebra: It's elementary. *Education Week*, 20(28), 14-15.

White/Jackson, J.E. (2001, June 18). Radical equations. *Time Magazine: Civic Innovators*, 157(24), 72-73.

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Witherspoon, R. (2002, February 19). Ending 'sharecropper math': The second crusade of Bob Moses. *U.S. Black Engineer Magazine*.

Kirkland, E. (2002, March). Do the math. *Editorial Projects in Education*, 13(06), 14-17.

Cass, J. (2002, June). The Moses factor. *Mother Jones Magazine*.

Siceloff, J. (Executive Producer). (2002, November 22). *PBS Now: American Education and Civil Rights* [Television series]. New York: WNET. (transcript not included)

Hayden, T. (2003, June 21). Bob Moses. *The Nation*.

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Cole, D. (2006, October 22). The civil right to radical math. *U.S. News & World Report*.

Yang, Z. (2007, February 2). Audience become discussion group as educator Moses raises question of quality education as a civil right. *Cornell University Chronicle Online*.

U.S. Senate Committee on the Judiciary. (2007). *Constitutional people written testimony submitted to the U.S. Senate Judiciary Committee by Robert P. Moses Tuesday, September 4, 2007*.

Siceloff, J. (Executive Producer). (2007, November 13). *PBS Now* [Television series]. New York: WNET. (not included)

TEACHER HERO: ROBERT MOSES by Margaret Dean

"...the most urgent social issue affecting poor people and people of color is economic access. In today's world, economic access and full citizenship depend crucially on math and science literacy. I believe that the absence of math literacy in urban and rural communities throughout this country is an issue as urgent as the lack of registered voters in Mississippi was in 1961. ...and I believe that solving the problem requires exactly the kind of community organizing that changed the South in the 1960's" (p. 5). - Robert P. Moses, Radical Equations

What is the common denominator of Civil Rights and algebra? The answer to the equation can be found in the name of one man, Robert Moses. An activist since the 1960s when he demanded political access for African-Americans by organizing voter registration drives in the South, Bob Moses focuses today on another fundamental civil right – economic access defined by math literacy. He wholeheartedly embraces the educational concept that all children can learn and that all children deserve the best education they can receive. To Bob Moses, it is all about removing barriers to learning, so disadvantaged youth can take advantage of new technologies and economic opportunity to experience workforce equality. Why algebra? Moses strongly believes that for an individual to succeed in the 21st century, he or she must be proficient in math and science. Since the information highway has been paved with revolutionary advances in computer technology and these indispensable tools are powered by mathematical symbolic languages, students need to become literate in math, the “hidden culture” of computers. Just like speaking a native language helps you to understand the people and find your way around a foreign country, so does the knowledge of a symbolic mathematical language help students to navigate the culture and terrain of computer technology, and algebra is the language in which students learn to manipulate these abstract symbols.

As a concerned parent and impassioned middle school mathematics teacher, first in New York and then in Tanzania, East Africa, Bob Moses speaks from experience. As often happens, the concept for The Algebra Project, which he founded to promote math literacy, grew out of a volunteer experience in his oldest daughter's middle school class in the Open Program of the Martin Luther King, Jr. Elementary School in Cambridge, Massachusetts. While his daughter was proficient in the math being taught at school, he felt what she was learning was inadequate to prepare her for her future. So, he took action. At the teacher's request, he worked with a small group of students. This small beginning multiplied into a movement in which his daughter's math teacher, the rest of the students and other parents became involved. The adage, “Think globally, act locally,” is exactly what took place in organizing a community around the teaching of algebra right where he lived. Three of Moses' children caught the wave of his passion and have since joined him in The Algebra Project as teachers.

So, how does Bob Moses make abstract math interesting and intelligible to inner city children and children of the rural poor? The answer is subway rides, games, competitions, gumdrops, toothpicks, lemonade and everyday life experiences. His students do not sit passively in a classroom and memorize equations and formulas. Instead, they take field trips and measure distances and map their journey. They assign symbols to points of interest. They create models and pictures and write creatively about their experiences. From these physical events and familiar experiences, they construct mathematical concepts, using practical logic and abstract symbols. The Algebra Project has become a model program for teaching math literacy. Its success can be measured in students' improved performance in math and in the number of students enrolling in college-prep math classes. Bob Moses' activism has brought the issue of math literacy front and center. Through the Algebra Project, he has raised awareness and united students, parents, teachers, and community members in the struggle to remove barriers to the fundamental civil rights of economic access and workforce equality.

Robert Moses is the recipient of numerous honors and awards, including the Heinz Award for the Human Condition, which seeks to honor those individuals who have created programs that protect and empower disadvantaged individuals. MY HERO celebrates Robert Moses, teacher and math literacy crusader, for his dedication to giving disadvantaged youth the opportunity to experience their economic potential in an increasingly technological society.

The sum of Robert Moses: Algebra Project founder sees education as the new civil rights struggle

Boston Globe – March 8, 2001 – By Mark Feeney

CAMBRIDGE – Back in the '60s, when he was organizing for the Student Non-Violent Coordinating Committee in Mississippi, Robert P. Moses was asked how he went about his work. "You stand on a street and bounce a ball," he said. "Soon all the children come around. You keep on bouncing the ball. Before long it runs under someone's porch, and then you meet the adults."

Twenty years later, Moses began the Algebra Project, a program that has won national acclaim for preparing students in largely rural and inner-city communities to take college-prep mathematics. He's no longer worried about meeting the adults, but the way he went about organizing in the Delta exemplifies his approach to education as well as civil rights. For him, the two are essentially the same thing. It's an approach that made Moses, 66, a legend in the movement. Other SNCC people became more famous: Stokely Carmichael, say, as a black power advocate, or John Lewis as a Georgia congressman. Moses's renown was of a different order. "He was the only one that had a kind of mystique," says Taylor Branch, author of the Pulitzer Prize-winning history "Parting the Waters: America in the King Years." "He was venerated."

That same organizing approach – basic, unexpected, inspired – has shaped the Algebra Project. "I could see when I met him, it was clear, he had a vision," says Frank Davis, director of the PhD Program in Educational Studies at Lesley University. "He had some ideas about getting there I'd never heard before – and I've spent my professional life working with just these issues."

In 1982, the project consisted of Moses tutoring his daughter and three eighth-grade classmates at Cambridge's King Open School. Today, it has a budget of \$2.5 million and reaches 10,000 students in 28 communities in 10 states. One of those states is Mississippi. Every Monday, Moses flies out of Logan to the state's capital, Jackson, via Cincinnati. There he teaches three math classes a day from Tuesday to Friday. Between wintry weather and flight delays, the trip can take more than seven hours. Why bother?

"It's the only theater where we can raise education reform as a civil rights issue," Moses says, sitting in the project's 30-part offices in Central Square. "We are fighting another twist of the same struggle as to how black people can move on to realize freedom. In the '60s, we seized on the right to vote in Mississippi and organized blacks for political access, and eventually that came about. So today we are seizing on math literacy as a tool of organizing economic access."

Moses describes the path he took from Mississippi to mathematics and back in a new book, "Radical Equations: Math Literacy and Civil Rights." A deeply reflective man, Moses is at once unemphatic and unequivocal. He tends to look to the side or at the floor while talking and speaks in a soft, unhurried voice. The words come out not so much slowly as inexorably: a clear mountain stream that meanders but will not be dammed. As he speaks, Moses communicates a sense of real concentration – as if each word has been pondered before he pronounces it, and that it's being uttered for the first time. It's a manner better suited to a philosophy seminar than a protest rally, but that's in keeping with both Moses' character and background.

Seen in biographical terms, Moses' journey from getting people into the voting booth to getting them into math class appears inevitable rather than incongruous, and his ostensibly radical equating of math literacy and civil rights isn't radical at all. In a sense, it has brought his career full circle. Born and raised in Harlem, Moses demonstrated an intellectual bent early on. He also received from his parents a strong moral and emotional grounding. "We struggled to make ends meet," he says, "but we also had a very strong family life." He attended Stuyvesant High School, an examination school akin to Boston Latin, then Hamilton College, in upstate New York, where Moses was one of only three blacks in his class.

Graduating in 1956, he went to Harvard to do graduate work in philosophy (his undergraduate major).

Two years later, his mother died and his father suffered a breakdown. Moses moved back to New York, supporting himself by teaching mathematics at a prep school – and tutoring future Rock and Roll Hall of Famer Frankie Lymon. A visit to an uncle in Virginia during spring vacation in 1960 fired Moses' interest in the civil rights movement. Back in New York, he sought out Bayard Rustin, who would mastermind the March on Washington in 1963, the rally where Martin Luther King Jr. gave his "I Have a Dream" speech. Rustin urged him to go to Atlanta for the summer to work at the headquarters of King's Southern Christian Leadership Conference. To most white Americans, the civil rights movement was a set of undifferentiated acronyms: SCLC, CORE, SNCC, NAACP. As those involved quickly realized, there were great differences among the groups. The NAACP, the oldest and best known, was also the most traditional, with the SCLC not far behind. SNCC was the most unorthodox and, not coincidentally, also had the youngest membership.

Moses found himself drawn into SNCC's orbit. The organization sent him on a brief trip into Mississippi, making him its first field operative. He returned to New York to fulfill his teaching commitment, then went back to Mississippi to head SNCC's voting rights project. He would stay there for four years, his life in near-constant peril. Moses was beaten, arrested, shot at. "I didn't know enough to be afraid," he once said. He just kept going, wearing his trademark overalls, urging people on in that quiet voice ("Moses could spellbind people by speaking in a whisper," Branch says). In 1964, he helped run Freedom Summer, which brought in hundreds of white college students to aid SNCC's efforts in Mississippi, and was the driving force behind the Mississippi Freedom Democratic Party, which tried to unseat the state's all-white delegation at the Democratic National Convention. Local people had taken to referring to him as "Moses in the Bible." Now it was New Testament analogies that came to mind. A Freedom Summer volunteer wrote, "He is more or less the Jesus of the whole project, not because he asks to be, but because of everyone's reaction to him."

Moses had always been a man apart in SNCC: older than almost anyone else, a Northerner in the South, a contemplative among activists, more mystical in orientation than political. These tensions took a toll. He grew increasingly estranged from the movement. His marriage ended. He gravitated to antiwar work. Despite being 31, he was drafted in 1967. He took this to mean the government was targeting him, so he went to Canada. Two years later, having remarried, he moved to Tanzania and resumed teaching mathematics. "We were way out in the boondocks," Moses recalls. His wife, Janet, taught English – she's now a pediatrician with MIT's health services – and their four children were born there. (Now grown, all are involved in the Algebra Project.)

Taking advantage of President Carter's draft-evader amnesty, Moses and his family moved to Cambridge in 1976 so he could return to the doctoral studies in philosophy he'd interrupted almost 20 years before. Then, in 1982, he received one of the first MacArthur Foundation "genius" grants just as Maisha Moses asked if she could take algebra. The school didn't offer it to eighth graders, but her teacher suggested Moses come into the classroom and teach her (as well as the three other interested students). The MacArthur grant had freed him financially, so he did. Thus was the Algebra Project born. "I think I've got another 10 years of this kind of work," Moses says. "I don't have a lot of bad habits," he adds, elongating "lot" as if to suggest he has a few hidden away somewhere. They're hard to find, though. He swims 2,000 yards a day. He's a vegetarian. He practices yoga. Just as important, he maintains an air of spiritual detachment. It's the counterweight to his political commitment and, presumably, is what has allowed him to stay dedicated to his ideals for four decades.

That detachment likely accounts for the fact that during a two-hour interview Moses smiles only once. That smile (almost a grin) comes when he's asked how it felt to have the state Legislature declare "Bob Moses Day in Mississippi!" and pass a resolution commending him for his civil rights and Algebra Project work. He never really answers the question, instead talking about John Hohn, the state senator whose idea the resolution was, and C. C. Bryant, the elderly civil rights veteran whom Moses asked to give the address he was supposed to deliver at the State House in Jackson. (It's something every successful organizer learns: Keep the focus on others, emphasize the group, make sure credit is shared.) That's all right, though. The smile is answer enough.

Algebra Project's simple and successful formula

March 8, 2001 – Boston Globe – By Mark Feeney

"Like the civil rights movement, the Algebra Project is a process, not an event," Robert P. Moses writes in his new book, "Radical Equations: Math Literacy and Civil Rights."

The project focuses on preparing mainly inner-city and rural students who wouldn't otherwise have access to the subject to take college-prep mathematics.

Underlying the process is an emphasis on experience, with the experience then reexamined through five steps.

To teach the concept of positive and negative numbers, for example, the project sends students on a subway trip or, if they live in the country, on a bus.

First, there is the event itself. Second is pictorial representation of the event - in this case, having the students draw what they did. Third is describing informally talking about the event - the students' discussing in their own words what they did. Fourth is a more formal description of the trip. Finally comes symbolic representation - in this case, making a number line to represent the trip, which can then be used to discuss directionality and the addition and subtraction of positive and negative numbers.

Another example of how the project uses first-hand experience to make mathematical concepts graspable is to mix lemonade from concentrate to teach the idea of ratios and proportion.

It sounds simple, perhaps, even obvious. Yet anyone who has taken algebra can appreciate how much the experience might have been improved by just such simplicity and obviousness. The real test is what the project has done for students.

"I've talked to several superintendents who have brought the Algebra Project into their districts and several principals who have brought the program into their schools," says State Senator John Hohn (D-Miss.), "and they will testify the Algebra Project is turning around students that a lot of other folks would ordinarily write off. There is measurable improvements on standardized tests. ... Moreover, what the program appears to be doing is giving the students a strong sense of self: that someone cares about them and that they can accomplish whatever they want to accomplish in life."

Even more than improved grades or test scores, such nonquantifiable effects may be what's most significant about the project.

"It really has made very clear the importance of this issue [of mathematical literacy]," says Frank Davis, director of the PhD Program in Educational Studies at Lesley University, "of bringing a lot of people to the table who might not [otherwise] get there - and then helping sustain them."

Civil Rights Campaign Evolves Into Algebra Crusade

Education Week – March 28, 2001—Vol. 20, Issue 28, Page 14 – By David J. Hoff (Washington)

When Robert P. Moses worked on civil rights voter-registration drives in the 1960s, the math was simple. The more black citizens who voted, the stronger the voice they had in political affairs. Almost 40 years later, the mathematician has trained his civil rights mission into more complex math: the study of variables and linear equations. After starting as a one-man tutoring operation in 1982, Mr. Moses' Algebra Project has grown to reach 100 schools sprinkled in urban centers and in rural areas in the South. The goal is to help minority children, mostly African-Americans, learn algebra so they can be prepared for the higher-level mathematics they need to succeed in some of the most high-demand jobs in today's economy. "Your education is tied to the kind of work that society has set aside for you," Mr. Moses, 66, said in an interview here during a tour promoting *Radical Equations: Math Literacy and Civil Rights*, a book he wrote with journalist Charles E. Cobb Jr. Without higher-level math, "the only jobs you can do are dead-end jobs," he argued. "You can't access the jobs that are driving society."

Homegrown

The book recounts Mr. Moses' experiences helping poor, black farmers in Mississippi in the early 1960s and explains how that sowed the seeds for creating the Algebra Project almost 20 years later. The project began when Mr. Moses, who had studied the philosophy of mathematics at Harvard University, was tutoring his eldest daughter, Maisha. When she reached 8th grade in 1982, he thought she was ready to learn algebra. But her Cambridge, Mass., middle school didn't offer the subject. Mr. Moses had just won a "genius award" recognizing his civil rights work from the John D. and Catherine T. MacArthur Foundation, the Chicago-based philanthropy that gives unsolicited grants to artists, scholars, and community activists. The five-year grant underwrote Mr. Moses' volunteer work as a tutor for Maisha and three of her classmates. Mr. Moses stayed at the Martin Luther King Jr. school after his MacArthur funding ended in 1987, and he sought other grants that allowed him to expand the project elsewhere.

Today, Maisha Moses and two of his other children still work for the Algebra Project, based in Cambridge. The goal of the project is to get black middle school students ready to take high school mathematics. It does so through providing teacher professional-development activities, teaching tools, and community-organizing activities. "The project has had a lot of success in getting people to accept this as an important goal," said Frank E. Davis, the director of the doctoral program in educational studies at Lesley University in Cambridge, who has evaluated the Algebra Project. While the project doesn't offer a specific curriculum, it does help teachers make mathematical principles concrete. In one example, Mr. Moses tells teachers to organize a trip as a way to teach equations. Students can calculate how many stops on a subway or bus line they must pass before reaching their destination. After each stop, they can figure out how many remain. The process helps teach the concept of subtraction in a way that prepares the children for higher-level mathematics. Instead of reinforcing the view of subtraction as simply "taking away" one number from another, he explained, the trip helps them see how the function expresses one number's position compared with another's. "It establishes the pattern of one place compared to another place," Mr. Moses said over tea at a Washington restaurant. "What we're working toward is a picture that they can carry with them."

Managed Growth

In his role as the leader of the Algebra Project, Mr. Moses teaches mathematics four days a week at Lanier High School in Jackson, Miss. Over the past five years, he's created enough curriculum materials to cover algebra, geometry, and the rest of the content covered in the first two years of college-preparatory math. He remains committed to his program, but he doesn't want the Algebra Project to grow too quickly. He'd rather see it grow and improve in the communities where it already operates and provide a model for others to follow. "I don't think it's important that we grow big," he said. "I do think it's important that we grow strong and be able to say: 'If you haven't been able to do this, come look at us.'"

Algebra: It's Elementary

Education Week — March 28, 2001—Vol. 20, Issue 28, Pages 1, 14-15 – By David J. Hoff (*Tenafly, N.J.*)

While educators and policymakers debate whether 8th graders can be readied to learn algebra, Sigrid B. Frawley sits in front of her kindergartners with a magic bag. She puts three tokens in the bag and pulls five out. Then she asks the students: "What's the rule?" "Add two," is the answer. Next, she puts four tokens in and pulls six out. "What's the rule?" she asks. The 5-year-olds don't know it, but they're talking about an algebraic equation: $x+2=y$. Students at Walter Stillman Elementary School in this suburb of New York City, in fact, get doses of algebra starting in kindergarten and lasting throughout their careers here. By the time they reach middle school, one-third of them will be ready for algebra in the 7th grade. Almost all take the course in the 8th grade. "The answer to, 'How do you get them there?' is: You give it to them early," said Principal William B. Greene. American middle schoolers are increasingly being moved into algebra courses. In what was once a rite of passage in high school, now middle schoolers—some as early as 7th grade—are now expected to learn about the mathematics of variables and quadratic equations. In California, for example, all students are expected to learn algebra in the 8th grade, according to the state's standards. In a 1998 survey, 95 percent of high school graduates had taken algebra, a 14 percent increase from eight years earlier, according to the Council of Chief State School Officers. To get students ready for that leap, the consensus among mathematicians and educators is that students need to be introduced gradually to algebraic concepts throughout the elementary school years. The only debate is how to teach it. "The student of algebra need not begin with a formal course in the subject," the National Research Council concluded in a January report on teaching mathematics. "From the earliest grades of elementary school, students can be acquiring the rudiments of algebra." "Elementary school really is the critical place for fixing America's algebra problem," said James Kaput, a professor of mathematics at the University of Massachusetts Dartmouth. "We're only slowly coming to terms with that."

Proper Functioning

At Stillman and at Tenafly's other three elementary schools, teachers follow the *Everyday Mathematics* curriculum and textbook series developed at the University of Chicago. In addition to her magic bag, Ms. Frawley integrates equations with variables into her arithmetic lessons. She'll write the equation $3+ \underline{\quad} =5$, and ask her students to fill in the blank. Second graders are encouraged to draw graphs of equations similar to the ones created from the objects Ms. Frawley draws from her bag. If the rule is to add 2 to every number, the students are asked to find a place for everything on the x and y axis. By 5th grade, students are completing word problems with introductory algebraic reasoning. For example, they're told that mules travel six miles per hour. They're asked to calculate how far the mules will have traveled after one, two, and six hours. Then, they're asked to figure out how many hours the animals took to walk 30 miles and 48 miles. If they saw the equation as $6x=y$, as they would in an algebra class, they might not understand it. But with the concrete examples in front of them, about 85 percent of the students can solve the equations, said Mireille Bany, one of the school's 5th grade teachers. "We've done it so many times that they know how to do it," she said. Such preparations are important, math experts say, because middle schoolers often have a difficult transition into algebra. After years of solving problems using basic arithmetic skills, they struggle with the mathematical reasoning and manipulations required to succeed in algebra. Students who learn arithmetic come to think of the equals sign as a function, much the same way the plus sign instructs them to add, according to Thomas P. Carpenter, the director of the National Center for Improving Student Learning and Achievement in Mathematics at the University of Wisconsin-Madison. The equals sign, however, "expresses a relationship rather than a command to do something," he said. If students don't understand that, they can't solve such beginning algebraic equations as $3x+5=15$. "Fifteen isn't the answer," Mr. Carpenter said, "but that's how they are thinking about it in arithmetic." Simple equations, such as the fill-in-the-blanks in Ms. Frawley's kindergarten class, help students understand what the equals sign means in algebra.

How, Not Why

While there's wide agreement that algebra should be introduced in the early grades, differences remain over how to teach it. California's math standards—which follow the traditional method of teaching the subject—

emphasize mastering addition, subtraction, multiplication, and division in the early grades. Algebraic concepts are introduced as ways to apply the algorithms. "You should be doing certain kinds of variable equations all the way along," said Wayne W. Bishop, a professor of mathematics at California State University-Los Angeles and one of the authors of the California standards. "You can't just assume you're going to dump everybody into 8th grade algebra if you haven't done some preparation with elementary linear equations." Teachers should mix simple word problems into arithmetic as early as 1st grade, Mr. Bishop said. They should even use "x" as a variable as part of the teaching, he said. By contrast, the National Council of Teachers of Mathematics' standards downplay the algorithms and treat algebraic principles more fully. In addition, teachers are encouraged to use real-life examples to illustrate the mathematics. One example in the standards has students filling in the blanks of a chart projecting the cost of bunches of balloons. The chart says that one balloon costs 20 cents, two cost 40 cents, three cost 60 cents, and four cost 80 cents. Students are expected to complete the series that extends to a bunch of seven balloons. Using variables such as "x" is "too abstract," contends Lee V. Stiff, the NCTM's president. "When it comes to doing algebraic manipulations, [students] can see how they did it with numbers, and then they can do it with variables," said Mr. Stiff, a professor of mathematics education at North Carolina State University in Raleigh.

Teaching Teachers

But even though young students are able to learn simple algebra, the ability of many elementary teachers to help them learn it is open to question. "You have elementary school teachers who do not know what algebra is about, so they're not in the position to think about how the arithmetic they're teaching will mesh with algebra later," said Roger Howe, a professor of mathematics at Yale University and a member of the panel that wrote the National Research Council report. Elementary school teachers generally don't excel in mathematics in high school and often aren't expected to take high-level courses in college. They often come to their first jobs afraid that they are unable to teach the subject, said Ms. Frawley, the kindergarten teacher here in Tenafly. Mr. Carpenter's center at the University of Wisconsin is working with teachers in Los Angeles, Phoenix, and San Diego as part of a larger project to get teachers thinking about how they can introduce variables into their grade school math curricula. Good teachers need to "build algebra eyes and ears," said Mr. Kaput of the University of Massachusetts, so that they can take advantage of any opportunity to teach about the subject. Mr. Kaput and his colleagues are working with 350 teachers in Fall River, Mass., to help them engage young students in algebraic thinking.

"What we do is teach the teachers how to take a problem and build a series of problems off of it," Mr. Kaput said. "It helps build [students'] computational skill and builds on the deeper understanding that we're after." Here in Tenafly, new teachers attend a one-week seminar on *Everyday Mathematics* before they enter the classroom. They then meet with mentors once a month to learn more about the goals of the program. The key to making the experience work, Ms. Frawley said, is to avoid the term "algebra" and focus on the real-life applications of the mathematics of the subject. "To say to them, 'You're teaching algebra in a kindergarten class,' that would throw them," she said of the new teachers. "They think of that as a high school class." But teachers have been able to pick up on the program and have fully integrated algebraic thinking into the early grades in a matter of three years, Ms. Frawley said. Sometimes, they're teaching the subject without even thinking about it. One morning early this month, Terry Moore, a 3rd grade teacher at Stillman Elementary School, is filling out the March calendar on a whiteboard. He writes the numbers symbolizing the first seven days of the month in their boxes. He calls on a student to tell him the number of every Wednesday of the month. The simple answer is to add seven to Wednesday the 7th. As Principal Greene watches, he points out that the exercise is a simple algebraic equation: $x+7=y$. Later, Mr. Moore is asked if he thought of the exercise as an algebra lesson. "Only since you mentioned it," he said. "It wasn't set up to do that, but you could make a function of it."

Radical Equations

Time Magazine, Civic Innovators – June 18, 2001 –Vol. 157, No. 24, pages 72-73 – By Jack E. White/Jackson

Bob Moses became famous as one of the chief organizers of the Freedom Summer of 1964, when hundreds of college students invaded Mississippi to fight nonviolently for civil rights. But Moses was also a math teacher, and that combination of callings helps explain what he has since become. Every Monday during the school year, Moses leaves his home in Cambridge, Mass., and flies to Jackson, Miss., to teach algebra at all-black Lanier High School. Moses, 66, is determined to make mathematical literacy as much a battle cry as voting rights were 40 years ago. He wants to overthrow what he calls "sharecropper education" by helping all students master algebra, preferably by the eighth grade, so they are ready to take college-prep math courses in high school.

Moses drills his students with the same quiet intensity he displayed in the '60s, when he was repeatedly beaten — and nearly killed — but never wavered from his path. He has hit upon a fresh, effective way to teach abstract math concepts. His method begins with physical experience, then moves to pictorial and finally symbolic representation. He teaches about integers by leading students on a tour of civil rights monuments. The kids then draw pictures of the journey and create number lines in which each stop represents an integer, and use them to add and subtract positive and negative numbers. "The idea is to use their real-life experience to learn abstract concepts," says Moses.

Moses has leveraged his ideas by training other teachers to apply them. His organization, the Algebra Project, born 19 years ago, is based on ideas he developed while helping his children learn to solve math problems. Today the project, which has its headquarters in Cambridge, has trained more than 500 teachers and reaches 10,000 children in 31 school districts. His approach seems to work. At Lanier, Algebra Project students have typically scored from 12 to 15 points higher (on a scale of 100) than the school average on statewide algebra tests. "He's getting the kids to believe they can do math," says Lanier's principal, Johnny Hughes. "That's the first step in helping them to achieve."

"Becoming literate in mathematics is a life-and-death issue for the black community," contends the civil rights pioneer. "If we don't get it, we're headed for a new form of serfdom"

Radical Equations

Rethinking Schools – Summer 2001; Volume 15, No. 4 – By David Levine

Civil rights veteran Robert Moses tells the story of the Algebra Project and the struggles to ensure math literacy for African Americans

In *Radical Equations: Math Literacy and Civil Rights*, veteran civil rights activist Robert Moses collaborates with journalist Charles E. Cobb to offer a stirring account of the Algebra Project, a reform initiative designed to help African-American students achieve a high level of mathematical competency. The book raises important issues about both math education and the struggle for racial equity within our schools.

The Algebra Project focuses mainly on the middle-school years, when Moses and his colleagues believe African-American children must be prepared to enter high school math classes, which will open the door to higher education and technical careers requiring a strong math background. It encompasses new curricular materials, teacher training, the development of student leadership, and community involvement well beyond the scope of most educational reform efforts. From a modest beginning in Cambridge, Mass., the program has grown into a national network with 18 sites, over 100 schools, and 40,000 students.

As a member of the Student Nonviolent Coordinating Committee (SNCC), Moses pioneered voter registration work in Mississippi during the early 1960s. Through his soft-spoken courage and patient encouragement of local leadership, he played a crucial role in building the movement which overturned state-sanctioned segregation and disfranchisement in the South. After a sojourn in Tanzania, where he and his wife Janet taught school, he and his family moved to Boston.

By 1982, Moses had been tutoring his eldest child Maisha in math for years. He believed she was ready for algebra, a subject not offered for eighth graders at her Cambridge, Mass., school. Since Maisha rebelled against having to do "two maths" — her regular schoolwork and the algebra tutorials her father insisted upon — he convinced her teacher to let him come to school to tutor her during the day. Soon he was working with a small group of students, and the Algebra Project was underway. As the program grew, it also became a family collaboration — Moses' wife Janet and his children Maisha, Omo, Taba, and Malaika all came to play important roles. In the early 1990s, Moses convinced a colleague from his Mississippi days, Dave Dennis, to bring the program into the Delta. This work has grown into a multi-state "Southern Initiative" of the project, which Dennis directs.

In their book, Moses and Cobb (a SNCC field secretary in Mississippi from 1962 to 1967 and now a senior writer for allAfrica.com) present the Algebra Project as a spiritual descendant and practical continuation of their organizing in Mississippi 40 years ago. They argue that the civil rights movement's undeniable achievements in winning civic empowerment and formal equality for African Americans failed to overcome the economic servitude still endured by millions of black Americans. This failure has been exacerbated by profound technological changes. Farm mechanization has reduced the 110,000 agricultural jobs in the Mississippi Delta during the 1960s to just 17,000 jobs today, reflecting a national erosion in semi-skilled and unskilled jobs in the industrial sector. At the same time, the computer revolution has generated the need for "knowledge workers" with strong academic skills. Cobb and Moses contend that poor (and poorly educated) white, Black, and Latino students of today are the equivalent of Mississippi's disfranchised Black sharecroppers of the 1960s, "trapped at the bottom with prisons as their plantations." More specifically, they argue that mastery of the increasingly technological workplace depends on increasingly sophisticated math skills, including algebra. "People who don't have it [algebra] are like the people who couldn't read and write in the industrial age," they argue.

To help African-American students master mathematical literacy, the program has replaced traditional, rote-bound instruction with imaginative activities that engage student creativity and encourage sophisticated mathematical reasoning. An African drums curricular unit is designed to pair a drummer and a teacher in lessons

which teach fourth and fifth graders about ratios, proportions, fractions, and rates. In his work with high school geometry classes, Moses encourages students to post their own versions of geometric proofs on the classroom wall, to be analyzed and possibly challenged by their classmates.

For the sixth-grade curriculum, which forms a bridge from arithmetic into algebraic thinking, Moses designed a five-step learning process. The students first observe or experience a physical event. For example, in a unit on positive and negative numbers, Cambridge students begin with a subway ride during which the teacher asks questions that focus their attention on their shifting environment. They then draw pictures, construct models, or in some other way create a representation of the event. The following step is to write a description of the event in their own language. Next, each class member translates their description into "regimented English," highly compact language which moves them into a mathematical mode, and from which they finally render the event as a mathematical expression. This five-step process helps students gain a firm grasp of mathematical ideas, connect math to everyday life, and become comfortable communicating in the language of mathematics. Similar classroom practices in geometry and algebra courses encourage students to debate mathematical problems and actively construct their own understanding of math concepts.

The Algebra Project's pedagogy is not unique. It resonates with the experiential, inquiry-based approach advocated by the National Council of Teachers of Mathematics (NCTM), and resembles intellectually robust math instruction that can be found in some classrooms around the country. But the grassroots organizing philosophy of the program offers a dramatic departure from many mainstream reform efforts.

Moses believes that math education innovations are often implemented by university researchers whose primary frame of reference is their own discipline and academic community, and the modus operandi is to offer pre-packaged programs to schools. In contrast, the Algebra Project works on the premise that oppressed people can only win just schools through political organizing. To emphasize this perspective, the early part of the book describes how Moses and other civil rights activists built the Mississippi movement during the 1960s. With the guidance of Ella Baker, an experienced veteran of the Black freedom struggle, Moses and his companions learned to develop the capacity of "ordinary people" to act as leaders and collaborate to bring about fundamental social change. Their approach, with its patient emphasis on democracy and nurturing the talents of poor people, has come to be known among civil rights historians as the "organizing tradition" of the movement. It is often contrasted with the "mobilizing tradition" of Martin Luther King, Jr. and other charismatic leaders, which is successful at turning out large numbers at demonstrations but often neglects the day-to-day work that builds powerful and sustained grassroots involvement.

For the Algebra Project, "organizing in the spirit of Ella" rests on three principles:

1) *The centrality of families to the work of organizing.* When Moses and other young organizers reached the Mississippi Delta, they connected with strong local leaders. Often, these leaders would involve family members in the movement, helping to create crucial networks of political activists. The Algebra Project seeks to involve the families of students and other community members in committees which run the local projects.

2) *Organizing in the context of the community in which one lives and works.* The young civil rights workers were absorbed into local families, who fed, housed, and protected them from hostile whites. This helped the activists "sink deep roots into the community." The Algebra Project also operates on the idea that staff members should be fully immersed in the communities which host local projects.

3) *Young people need to be empowered to fight for their own liberation.* Moses points out that high school- and college-age young people provided some of the crucial leadership of the civil rights movement. He believes that the reforms necessary for young Black people to achieve deep math literacy will only come about when they become ardent and savvy advocates for their own education. Through the program's Young People's

Project, for example, students tutor their peers, lead workshops for students and adults, and help plan and run math youth camps during the summer.

Algebra: Key to Economic Liberation?

One of the book's core arguments is that students must master algebra to succeed in the workplace of the future. They cite Labor Department statistics that 70 percent of current jobs require "technology literacy" and that by 2010 all jobs will require "significant technical skills." Increasingly, essential technological expertise has come to mean relatively sophisticated understanding of how to use computers to perform a multitude of vocational tasks. To fully master computers, they argue, students need to be comfortable manipulating symbolic representations which represent "underlying mathematical concepts." They further argue that our society has designated algebra as the place where young people acquire such skills.

This cornerstone argument needs further documentation to be fully creditable. The phrases "technology literacy" and "significant technical skills" are quite general. We need to know if such literacy and skills specifically include algebraic thinking. Another issue is the varied impact of increased computer use on different occupations. The computerization of a job does not always bring the need for more sophisticated intellectual skills. Many low-paying service jobs have incorporated computer use which require learning some new procedures, but not mastering substantially more demanding cognitive tasks. The authors would have been more persuasive if they had offered concrete examples of how algebraic skills are used in particular jobs, and evidence that such jobs are or will become a major part of our evolving economy.

Nevertheless, Cobb and Moses are not wrong to assert that algebra functions as a crucial gatekeeper to full economic opportunity. Even if a young person is not drawn toward a highly technical vocation, high school algebra is usually required for college entry. In addition, algebra provides knowledge necessary for advanced math which prepares students for a number of technical and scientific careers. Too many students of color lose these options through poor math performance before they reach high school. As Cobb and Moses note, part of this problem is reflected in Ph.D. statistics for technical fields. In 1995, Blacks were 15 percent of the U.S. population but earned "only 1.8 percent of the Ph.D.s in computer science, 2.1 percent of those in engineering, 1.5 percent in the physical sciences, and 0.6% in mathematics." Finally, even though the authors could have presented stronger evidence regarding the relevance of algebra to adult employment, the technological evolution of many occupations does support their case. An understanding of algebraic concepts can help workers become more adept at working with spreadsheets, graphs, and databases. Our computer-based economy increasingly calls for such skills, even outside of highly technical fields.

Is the Program Working?

In assessing initiatives such as Algebra Project, a crucial question is whether the program is meeting its stated goals. In Bessemer, Ala., teachers at Hart Elementary, a school of mostly poor, Black children, started participating in the Algebra Project in the fall of 1991 while teachers at the predominantly white West Hills, one of the "top elementary schools" in the district, continued with traditional math instruction. During a three-year study initiated in 1995, Hart moved from trailing West Hills on standardized math tests by several points to exceeding it by a few points, compiling the highest scores in the district.

Radical Equations and other Algebra Project reports are filled with similar success stories. They also document instances in which Algebra Project students register in greater numbers than their peers in higher-level math courses. As Cobb and Moses tell the Algebra Project story, they weave into their narrative extended testimonials from parents, teachers, and students which provide both penetrating explanations of the reform process and many examples of how the program has helped students learn more.

While the vignettes and overall narrative thread give us a persuasive picture of an effective reform movement, the book would have been strengthened by more systematic documentation and analysis of the program's impact on student achievement. We need to learn more about the extent of the program's success in

strengthening students' math abilities, and the classroom dynamics which make such success possible. In-depth case histories of Algebra Project classrooms would be helpful, as would comparisons between the learning experience of students within the program and the learning experience of similar students in traditional math classes. Research on the project should not fall victim to the popular and crude trend in American education to judge programs mostly by narrow quantitative measures. Cobb and Moses cite increased standardized test scores to document the program's success, but realize that such numbers only tell a small part of the story. They examine the Algebra Project's impact on student motivation and work habits, teacher attitudes and behaviors, and community involvement. Future research should build upon and extend this holistic approach.

Algebra Project Lessons

In a review of school reform during the past century, educational historians Larry Cuban and David Tyack note that innovations often falter because their advocates fail to win political support. *Radical Equations* does a good job of teasing out insights from the kind of political work which builds durable support for substantive changes in how schools function. It offers a refreshing contrast to glib and self-congratulatory recipes for fixing up schools.

Even after nearly two decades of nurturing the program, Moses writes, "I have thought of the Algebra Project as a young child who is trying to stand up and teetering and falling down a little, then getting back up." The book pays careful attention to this teetering up and down of small groups of people trying to make their schools better. Cobb and Moses glean insights into the often contentious dynamics of school change from battles with the constraints of rigid standardized testing, uneasy administrators, and bureaucratic fear of innovation. The challenges faced by the Algebra Project affirm what they learned in Mississippi: people have to be willing to change themselves if they are to develop the strengths they will need to change the system.

Beyond the issue of math instruction, the Algebra Project offers compelling lessons on how determined networks of educators, parents, and students can build a program which advances educational equity. Such democratic renewal promises the obvious rewards of promoting academic and vocational success for young people. But perhaps just as important, it also affirms local people's cultural values and capacity to deepen community life through shaping the public institution most likely to have a profound impact on their children. "Organizing in the spirit of Ella" means school reform which enriches the lives of teachers, community members, and students.

In contrast to top-down reform initiatives which demean the expertise and professional pride of teachers, Moses and his colleagues have developed training programs which build upon their strengths. A Cambridge, Mass., teacher comments, "Bob was affirming what we were doing while he was helping us change. He didn't come in and say, 'We're throwing this out, it's junk.' He came in and said, 'You guys are great. Wanna try something different?' When we asked, 'How will it work?' he turned around and asked, 'Well, how do think it should work? What do you want to have happen?'" By posing problems rather than solutions, Moses invites teachers to confront and work through the frustration and anxiety of experimenting with new ways of teaching.

Such collaborative processes within the classroom are buttressed by efforts to involve community members. Although the dynamics of community involvement differ from site to site, the project is deeply committed to encouraging local control. During a 1998 visit to Jackson, Miss., Algebra Project, I talked with Kathy Sykes, who served as a project staff member and representative on the local Site Planning Committee. This group reviewed the program budget, helped plan such activities as student retreats, and encouraged parents to serve as chaperones for program activities. The committee also encouraged parents to sit in on classes, and eventually hoped to train parents as classroom assistants. Sykes told me, "I feel this is sort of like a crusade ... I think that the work which is going on here will make a difference in the lives of our people and that's why I want to do what I can to see that it continues."

The program seeks to instill this spirit of personal responsibility through pedagogy which encourages students to break out of their own passivity and take charge of their own learning. Mary Lou Mehring recounts how 12-year-old student Andrea Harvey asserted, "I'm going to do four lessons a week because I want to finish such-and-such by the seventh grade, so that I can finish the book by the eighth grade, so I can be in honors geometry in the ninth grade." Andrea went on to work with the Algebra Project and eventually become certified to teach math in the Boston schools.

As a continuation of the civil rights movement, the Algebra Project places itself firmly in the tradition of education aimed at racial equality. At the same time, Moses conceptualizes the goal of the endeavor almost exclusively as improved job opportunities. The program does not appear to directly use math instruction to help young people see full citizenship as the opportunity to use their math skills to promote social justice. As indicated by middle school teacher Eric Gutstein's article in the Spring 2001 issue of *Rethinking Schools*, math can be used to analyze social inequities within our society — such topics as the disparities between rich and poor school districts, the mathematics of sweatshop economics and the quantitative injustices built into the wealth and income structure of our society. Such themes might represent a fruitful direction as the program's curriculum evolves.

However, the absence of political math content hardly means the program is apolitical. The authors persuasively echo Ella Baker's assertion that demanding something which is essential to your life which you are systematically deprived of is an inherently radical act. Moses approvingly cites instances when young people agitate that their schools dramatically improve math instruction.

For African Americans, the struggle for education has always been entwined within the struggle for freedom. This intimate historical relationship is underscored when the authors quote Mississippi school desegregation activist Mae Bertha Carter: "The way to control Black people or anybody is to keep them dumb. Back in slave time they catch you reading and they would whip you. Education, that's the goal. These [present day] school systems ain't doing nothing but handicapping these children."

In a society so afflicted with faulty historical memory, the Algebra Project demonstrates the necessity of learning from our past to fashion our future. In doing so, it puts history to its most honorable and practical use.

The Circumference of a Circle: Can students be led to find that math is not boring?

Education Week — February 13, 2002—Vol. 21, Issue 22, Pages 44,47 — By Arnold Packer

Successful 5th graders learn that the circumference of a circle is equal to pi times the circle's diameter: $c = \pi \times d$. That is a fairly useless lesson—a computer can do it more quickly and accurately than the best student. On the other hand, finding that pi is equal to the circumference divided by the diameter ($\pi = c \div d$) can be exciting. Some (most likely Greek) human noticed that the ratio stays constant irrespective of the circle's size. New patterns can be discovered by thoughtful observation. Even 4th grade students can be given pieces of string and circles of various sizes and discover for themselves that three diameter lengths plus a little extra goes around a circle, regardless of how big or little the circle is. Wow!

The fact that most math pedagogy is of the $c = \pi \times d$ type may be the reason that many students find math so hard. The average National Assessment of Educational Progress score on the mathematics test for 17-year-olds in recent years is just above 300. This means that the *average* American 17-year-old can compute with decimals, use fractions and percents, recognize geometric figures, solve simple equations, and use moderately complex reasoning. The averages among African-Americans (286) and Hispanics (292) were below 300, meaning that many of those students could do no more than the four arithmetic operations with whole numbers and solve one-step problems. Over half the students entering California's state college system need to take a "developmental" mathematics course. Over one-fourth of college freshmen feel that they will need tutoring or remedial work in math. This compares to one in 10 for English, science, and foreign languages.

Math phobia and the resulting deficiencies have always had deleterious effects; but these soon will become even more serious. The reauthorization of the Elementary and Secondary Education Act signed by President Bush early this year mandates annual tests in grades 3-8. Business and other organizations that have fought to bring about these high-standard tests will now apply pressure to extend testing to the 12th grade. Students in a number of states will be facing high school exit exams in the next few years (Massachusetts in 2003).

Students who fail will be denied their high school diplomas. Many, if not most, of the denied will have failed their math exam. (In this trial year, 18 percent of Massachusetts 10th graders failed English/language arts, while 25 percent failed mathematics.) Even today, many interested in college programs leading to degrees in a technology field are denied entrance because of their weakness in mathematics. Current practices serve half our students poorly, and the National Adult Literacy Survey, or NALS, documents the difficulty beyond adolescence. By some estimates, less than a fourth of American adults are at the upper-end, literate levels of 4 and 5.

The evidence suggests that students will not be able to graduate from high school *if* the high math standards are part of the exit exams *and* the current prevalent math pedagogy and assessments persist. If that is so, then the policy-relevant hypothesis is: *Can changes in pedagogy and assessment make it possible to have both high graduation rates and rigorous exit exams in high school mathematics?* We have been trying to test this hypothesis in Baltimore's high schools. Can students be led to find that math is not boring? But wow! The technique we are testing in Baltimore is project-based learning. Students in these high schools must use mathematics to complete a project. They also make use of technology and tools such as spreadsheets to develop, for example, a business plan. The math is rigorous: Probability determines inventory, lines intersect at the break-even point, charts and graphs must be made and explained.

Algebraic equations are used because students find it easier to use symbols like r and c , rather than type in the words "revenue" and "cost" in their spreadsheets. In this way, they can visualize the problem, something impossible to do when the abstractions x and y are used. Indeed, we eschew x and y throughout high school so that visualization is possible. Many math educators object. "The power of mathematics is its generalizability," they insist. The empirical fact that most students never get it does not faze them. We believe that students would do better if they began with the specific and moved to the general later—maybe introduce x and y as variable names in college algebra. What are the results of this approach? Three "zone" (neighborhood) high

schools, among the city's most-challenged secondary schools, used this project approach in math, English, and other courses. Baltimore's zone high schools have an almost incredible 29 percent graduation rate—a 71 percent dropout rate. Only 64 percent of the students who made it through 11th grade in the comparison group drawn from these schools took and passed Algebra 2. Their average math grade point average was 1.46.

About 90 percent of the students in our project-based group (a total of 84 in two graduating classes) graduated. About 90 percent of these students took and passed Algebra 2. Their average GPA, although only 2.12, was 45 percent better than the comparison sample. A note about the comparison is in order. The youngsters in the test group were not randomly chosen, but were deemed to be in the middle 50 percent of the class—neither the best nor the worst. The comparison group, however, was taken from those who had made it past 11th grade—a small minority and the better students in these schools. These students have not been tested in any standardized way, because there is no standard assessment that tests what is often called “quantitative literacy” (a term coined by Lynn Arthur Steen in *Mathematics and Democracy*). What would the high school exit assessment look like if this pedagogy were adopted? Certainly, the assessment would not look like those current exams containing x and y equations, factoring, and the old algebra problems of canoes going upstream and trains crossing in the night. On the contrary, pedagogy *and* assessment should be directed to making students quantitatively literate—that is, able to use math in their likely adult roles.

What sort of assessments would test their capacity to successfully fill their likely adult roles as producer (worker), consumer, and citizen? One set of questions would see if students could handle budgets: For their future worker role, using a spreadsheet with algebraic formulas, can they develop a budget for a retail store, construction project, manufacturing operation, or personal-services office, such as a dentist's? As a consumer, using pencil and paper and a set of criteria and prices, can they develop a monthly budget for a family of four or put together a budget for a party? As a citizen, can they explain an agency or organization budget for the last five years, demonstrating understanding of the growth or decline of budget components themselves and as shares of the total? Can they relate these changes to other variables, such as inflation and population growth?

Scheduling provides another example. Again, in the worker role and using a spreadsheet with algebraic formulas, can students develop a schedule for a construction project, advertising campaign, conference, medical regime, or software project? The solution should require conversions from hours to workweeks. Students should understand the difference between activities done in sequence and simultaneously and be able to use PERT and Gantt charts. As consumers, and using pencil and paper without a calculator, can they plan a party or a meal when a solution requires converting hours to minutes? A quantitatively literate citizen, on the other hand, should be able to understand why it takes so long to build a road or school.

Students should be able to use statistics in each of these three roles. For example, as a worker, can they use techniques of statistical process control to monitor a manufacturing process, or patient or customer complaints? As a consumer, can they understand statements about the quality of the products or services purchased? As a citizen, can they understand debates about environmental safeguards or AIDS? Students should also know how to use mathematical models of systems. Can they, in their worker role, develop an information (or traffic, or other) system flowchart and build a mathematical model to simulate its operation? They should be able to think on their feet, including manipulating numbers mentally to negotiate about quantitative matters. For example, a worker should be able to participate in a labor-management negotiation. Similarly, an educated consumer should be able to understand a construction contractor's or mechanic's proposal and negotiate a fair agreement. An educated citizen should understand government negotiations. Teachers, test developers, and administrators will have to invest in a substantial effort to make the suggested changes in pedagogy and assessment. Some members of each group will undoubtedly complain loudly about “losing” the power and beauty of mathematics. Unfortunately, most American students never find mathematics powerful, interesting, or useful under current practices.

Ending 'Sharecropper Math': The Second Crusade of Bob Moses

U.S. Black Engineer Magazine – February 19, 2002 – By Roger Witherspoon

Bob Moses has spent most of his life running revolutions. The goal of his first one was to break the back of segregation in Mississippi. His second aims to break through the barrier to higher math that has kept so many Black youths from succeeding in higher education and the technological world of today.

Moses is a soft-spoken, 65-year-old mathematician from Cambridge, Mass., who came to Mississippi in 1960 to organize the voting rights project for the fledgling Student Nonviolent Coordinating Committee.

In those dangerous days, he drove around the state, sitting with Black sharecroppers, shucking corn with them, walking the fields, talking about the right to vote and the power it brought. He was followed, threatened, jailed, and beaten. Being seen with him could get a Black person's house bombed and lead to arrest, beating, and death.

A 'Four-year War'

By 1963, more than 60 Blacks had been murdered in Mississippi for associating with Moses' voter registration efforts. But, rather than back down, he and David Dennis, head of the state's voting rights efforts for the Congress of Racial Equality, decided to escalate the struggle, by inviting thousands of White students to Mississippi to help.

"We were powerless," Moses says. "We had no protection for ourselves. We needed to try something different. If these kids came down to Mississippi, the country followed them down. It's what the country would not do for us, for the Black people who were there working."

In the summer of 1964, more than 1,000 Northern college students answered Moses' call to come to Mississippi for a statewide voting rights drive. By the end of the summer, there had been 1,000 arrests, 30 buildings bombed, 35 churches burned, 35 people shot, 80 people severely beaten, and six murders.

But SNCC succeeded in riveting national attention on racism in the state and in forming the Mississippi Freedom Democratic Party, which, ultimately, desegregated the state's political apparatus. It was a wrenching victory in a four-year war. "It was 24/7 and intense. We didn't do anything else." Now, he is engaged in a longer, broader struggle -- again to free Blacks to thrive in American society.

Three Generations

"We're now confronted by the fact that the whole society has invested in education as our main opportunity structure," he says, "and we're trying to get our own group in. I think we've got a couple more generations if we are able to make this strategic change."

Moses is teamed again with Dave Dennis in The Algebra Project (<http://www.algebra.org>), an effort to improve the way algebra is being taught in predominantly Black schools. The project, born in 1982, the year he won a MacArthur "genius grant" for his organizational and math reformation work, began as Moses' effort to teach his own kids. It now serves some 10,000 students in 28 cities, mostly in the old Cotton Belt in the South.

Every Monday morning, Moses flies from Cambridge to Jackson, Miss., teaching kids and teachers at Lanier High, an all-Black school with about 1,000 students that is the home base of The Algebra Project. He began teaching in the Brinkley Middle School in Jackson, with the children of voters he had organized decades earlier. Now, he is teaching the grandchildren of some of those pioneer voters.

Moses and Dennis follow the procedure they perfected in the early 1960s, enlisting one soldier at a time. It is a slow process, but after years of work, they have succeeded in creating a formal network of young math literacy

workers: The Young People's Project, a nonprofit headed by Moses' son Omowale. His daughters Maisha and Malaika and his other son, Tabasuri, also work with The Algebra Project.

Resistance to Change

"The real problem is getting the community-organizing project done," Moses says. "We aren't just dropping into schools. We are asking people to form a network, and you have to have a local group that owns the project and looks at the policy decisions. The hardest thing is getting school people and community people together in such a group. Parents have to own it. The school and the system is going to have to have some integrity about the implementation of the project. And it takes a couple of years before a teacher who has been teaching in a traditional way is comfortable changing the way she teaches."

In addition, Moses says, in an era when the national watchword in education is accountability, there is a reluctance of school systems, who are used to teaching to state progress tests, to deviate from an established formula. "Drilling the kids on what is going to be on the test is the standard way to teach algebra," Moses explains. "But the main complaint about students who major in math or take math sequences is that they are proficient in a lot of complicated procedures and mathematical algorithms, but they don't know how to think about the math, and, worse, they don't know that they should think about the math." Moses' five-step method of instruction, explained in detail in the book "Radical Equations: Math Literacy and Civil Rights," begins with physical experience, finding "hooks," some part of the students' everyday lives to incorporate into the instruction and give them an internal sense of what's going on with the math. He has patented games that expose kids to basic math concepts while they're focused on winning.

The project has been successful in increasing math achievement. Eighth graders in West Tallahatchie, one of Mississippi's poorest communities, scored 5 percent above the mean on the state's algebra test. Those who'd attended a special workshop on graphing calculators scored 10 percent above the mean (See "A New Spin on Math," USBE & IT March/April 1999.).

Full Citizenship

As the project spreads and the changes in the conceptual way of teaching algebra take root, it helps complete a movement Moses started 40 years ago.

"There is a legacy from slavery and afterwards where the country agreed to set up sharecropping and sharecropper education tied to the work in the fields and low expectations for Black children. This was exported around the country during the 40s and 50s," he says. "The goal of The Algebra Project is to put a floor under all the children in the country, so they have the option, when they graduate, to go to college if they exercise that option, and not have to remediate any subject area.

"That is the goal, and I think it is necessary to get people ready for citizenship. The sharecroppers we worked with in the 60s were serfs of the industrial economy. The country is growing with a city-serfdom now, with young people who either graduate or drop out without the tools needed to access the economic opportunities sufficiently to support themselves and their families. "We want to end that."

Given his track record, Moses may well lead generations of Black youths into a more open future.

Do The Math

Teacher Magazine – March 1, 2002 – Vol. 13, Issue 6, Pages 14-17 – By Elizabeth Kirkland

On a rain-drenched December evening in Jackson, Mississippi, a multicultural crowd files into the Crown Room of the Clarion Hotel for a formal dinner honoring math educators. The room is dressed up in typical ballroom style: A podium is set for speeches, and round tables decorated with white tablecloths and candles await a sumptuous meal. But something decidedly unconventional has taken over the parquet dance floor: Carnival-esque booths snake around its perimeter.

The setup is unusual, but the guests are into it. Teachers, state government workers, lawyers, activists, parents, and students all line up eagerly to try their luck at various games. At one stall, participants are using probability to calculate their chances of rolling a specific combination on three color-coded dice. It looks like a craps game—except for the people scribbling Xs and Ys on scraps of paper before they place their make-believe bets with a “banker.”

At another booth, Sammie Myers, a lighthearted and outgoing 21-year-old, is manning a hula hoop activity. This is an averaging game, he says, grabbing one of the plastic circles lying haphazardly on the floor in front of him. He explains that, during three rounds, three groups of people will compete to see how fast they can step through the hoops. In each succeeding round, the allotted time will increase, and participants will note how the number of people who run through the hoops varies. With a graphing calculator, they'll then plot their data and perform a linear regression to determine a line of best fit, which illustrates trends in the data. Armed with this information, they'll try to predict what will happen in future rounds. Laughter and squeals of surprise punctuate the goings-on. The scene's a far cry from the tedious math classes many of the guests endured in high school, so it's not surprising that they don't notice they're actually practicing math skills.

Tonight's activities were arranged by the Young Peoples Project, a Jackson-based group of teens and 20-somethings who teach mathematics through games, and they illustrate the theory that drives the organization: When people aren't intimidated by the subject, they'll learn and use math. It's an idea that works particularly well with young kids and adolescents, says Myers, who helped found the organization. “If young people are having fun, that's what they want to keep doing. We use the games as a tool to get their attention.”

The group may be devoted to making math fun, but YPPs origins lie in a serious truth: Rigorous math courses in school lead to economic success later on. According to one U.S. Department of Education study, *Mathematics Equals Opportunity*, only 36 percent of students who don't take algebra I and geometry go to college. Yet, the report finds, fewer than half of all low-income students take these courses.

For Bob Moses, a math educator and a civil rights activist who works in Jackson and Cambridge, Massachusetts, these numbers have dramatic implications. “Were growing serfs in our cities,” he notes, adding that without higher-level math to open the door to college, kids are condemned to dead-end jobs. And he argues: “If they don't have an income to support family in some legitimate enterprise and they hit the streets, then pretty much they're into the criminal justice system sooner or later. So this is a huge problem.”

In the early 1980s, Moses started the Algebra Project, an organization that teaches algebra to low-income and minority middle schoolers using creative techniques and real-world examples. Since then, he and his team of adult tutors have taught thousands of kids in 28 cities, the majority of whom perform above average on standardized tests and go on to study upper-level math.

Moses' four children—Maisha, 31; Omowale (Omo), 29; Tabasuri (Taba), 27; and Malaika, 25—grew up alongside the Algebra Project, and all have assisted with the program in various capacities. But by the mid-90s, his two sons—Omo, a math major, and Taba, who was still in high school—were itching to add a student-driven element to their fathers work.

"I could feel that there was a need for young people to do something [for themselves]," Omo explains. "The Algebra Project intervenes in the classroom with teachers and administrators. We were trying to figure out some things we could do to impact our peers." Several 8th graders from Brinkley Middle School in Jackson who were studying with the Algebra Project at the time, including Sammie Myers, suggested creating a group in which students could help each other understand and practice math skills.

The Moses brothers tested out the idea by having the 8th graders join them in supervising math games for other kids their age at a nearby Algebra Project site in 1996. "It was intensive work," Omo says, but the kids who were being tutored admired the team leaders and enthusiastically participated in the program. The group decided to become a collective, in which members plan activities together as equals, and to remain affiliated with the Algebra Project. As the original batch of 8th graders moved up through school, they stuck with the effort and recruited their peers to help spread the math message.

Today, YPPs volunteers, mostly high school but some college students, work out of two offices, one in Jackson with about 100 members and one in Cambridge with 50 members. The groups meet weekly outside of school hours to create games, first deciding what skill they want to teach, then brainstorming activities around the concept. Bob Moses often helps refine game ideas, and members test them out. When an activity is ready, it's used at one of the groups sessions--held, on average, once a week--for 6th to 8th grade kids at schools, Boys and Girls Clubs, and other locations. During school breaks, YPP workers often travel across Mississippi and other states to create a buzz about math, and some of them teach at the summer day camp for 3rd through 8th graders that the group runs in Jackson.

Omo Moses says operating a startup nonprofit, which supports itself through grant writing and other fund raising, is more difficult than he first anticipated. "There's been a learning curve in terms of learning how to run an organization," he admits. Yet he's pleased with the way YPP has developed over the past five years. As members have helped kids with its programs--thousands of youngsters to date--they've also reinforced their own math skills. What's more, it's shown them that "they can really design and help implement things in their communities."

All along, the organization has made a special effort to document its work, so the YPP model can be replicated in the future in other communities. And though it's too soon to measure the long-term impact of YPP, Algebra Project research shows that more students are on the college-prep track at high schools with YPP members than at schools without.

Bob Moses couldn't be prouder. His children's organization has grown from a tendril of the Algebra Project into "a solid root," as he describes it. "That's probably one of the main blessings of our lives," he says.

Gina Wilkerson considers YPP a major blessing in her life. No one would call her a math nerd in--green cargo pants, a stiff black cotton shirt with a tie around the waist, and black chunky-soled shoes, she looks every bit a cool teenager. But tonight, helping YPP provide the educational entertainment at the Clarion Hotel dinner, the Lanier High School junior sounds like a young Emmy Noether--the early 20th-century mathematician known as "the mother of algebra"--as she explains inductive reasoning at one of the game booths. "Before [I joined YPP] I didn't like math," she confesses during a break. "I hated it. It was just the way our teachers taught math--it wasn't interesting. They taught it straight out of the book without using different things to explain it. But when I went to YPP, they had developed games, and it became easier. I applied what they showed me to my work, and it made it fun instead of being boring. Now I love math."

Before any of this could happen, though, Gina had to convince her mom that YPP was for real, even though it was run by teens. Rita Wilkerson, a tiny dynamo of a woman standing nearby, remembers how she was highly

skeptical when, two years ago, her daughter approached her about quitting cheerleading to study math of all things.

"I had to get in there and see how these young people do their math," Wilkerson recalls. So she went to a few YPP meetings. She liked how the group leaders showed their peers different strategies for approaching math problems. And she was excited to see that YPP gave the kids some access to Bob Moses. "When Bob comes in, everyone gets quiet; everyone gets in their seat," she observes. "They're very attentive toward him, and they absorb everything that comes from this man."

YPP piques kids' interest in mastering the challenging subject, Wilkerson says, because "they're excited that they can take the math and do it. The confidence level and self-esteem are there. I wouldn't want [Gina] to be any place else." Wilkerson's so keen on the group that she's become known as "the YPP mom," regularly shuttling group members to events in her car.

Changing perceptions about the kinds of kids who do well in math--and in school, in general--is a crucial focus of YPP, notes Maisha Moses, who helps oversee the groups projects. "We don't try to find the best math students but just the people who are interested in doing the work," she says of choosing the YPP workshop leaders. "They come from the same communities as the other kids and deal with the same issues." Because of that, she explains, learning math becomes OK.

Equally valuable, Maisha argues, is the groups family like embrace, which encourages the kids to stick with the subject. "It's not often you can work with students like this over a number of years," she says. "I've gotten a sense that, for a number of them, this is a stabilizing part of their life. There's nothing else really like it around." YPP members often help each other with their school lessons, Gina Wilkerson reports. They quiz each other and use the games to clarify algebra principles.

The group has certainly affected Gina's high school experience. She's taking trigonometry, computation in business, and chemistry this year, and she wants to major in psychology at college, with an eye to becoming a guidance counselor in the future. "I want to be someone [students] can look up to, like Maisha," she says.

And YPPs transformed Sammie Myers' life, to hear him tell it. Myers was 15 when he helped start the organization. Although he was struggling with math at the time, he was looking for something to do after school. YPP offered a positive option. Had he not signed on with the project, Myers says, he probably would have gotten caught up in the rough street culture. "That's not to say that the Young Peoples Project saved me," he observes, "but I made a decision to help with the process. It gave me another choice. I chose YPP and not the streets." Now he's studying business and accounting at Hinds Community College in Raymond, Mississippi, and plans to attend a four-year college. Myers is particularly proud of the fact that he's visited 30 different states to teach workshops with YPP, something he says he would not have been able to do otherwise.

"Some people call me an activist," Myers says. "I don't want that title just yet. I don't think I've done enough." And, he adds, he's uncomfortable with titles in general. He thinks for a minute, then reconsiders. Just call him a "math literacy worker," he says.

The Moses Factor

Mother Jones Magazine – May 01/June 2002 Issue – By Julia Cass

The students enter the classroom noisily and take their places in groups of five or six at a series of beat-up tables. Some open the clear plastic folders containing their work and look over what they did in yesterday's class. Others rummage through their backpacks and talk with their neighbors.

Bob Moses stands at the front of the spare white room, taping sheets of newsprint to a flip chart. With his wire-rim glasses, gray goatee, and serene composure, he looks like a cross between a college professor and a yogi. Even in a roomful of 25 ninth-graders, Moses has the calm, self-contained manner of an Eastern mystic.

"Okay, listen up," he says. "Enter your data, then get the means and displacements." Moses designed this lesson, called the wingspan exercise, to teach key concepts about algebra and statistics. First, students measure one another's outstretched arms from fingertip to fingertip; then they calculate the mean for their group and the "displacement" of each person's wingspan from the mean.

The students settle down to work. Along two walls, big windows offer a glimpse of the sagging houses and vacant lots that border the school. Lanier High is located on Martin Luther King Jr. Drive in Jackson, Mississippi, and like so many other streets named for the Civil Rights leader in black communities across America, it speaks more of defeat than of dreams. Lanier was the first African American high school in Jackson, and it remains virtually all black, with two whites in its student body of 911. Some 83 percent come from families with incomes below the poverty line. Most read and do math below their grade level. A third fail to graduate. Only a handful go on to attend four-year colleges.

Moses goes from table to table, helping students with their algebra problems. The children were not yet born when their teacher first came to Mississippi in 1961, and few realize that the man checking their math was one of the most venerated leaders of the Civil Rights movement, considered by some to be the equal of King. As a "field secretary" with the Student Non-Violent Coordinating Committee (SNCC), Moses organized sharecroppers, domestics, and others at the bottom of society to fight for their right to vote -- an effort that sparked a violent backlash from whites accustomed to unchallenged rule. In the face of beatings and arrests, Moses became legendary for his humility and calm commitment. In 1964, he orchestrated Freedom Summer, the ambitious project that drew nearly 1,000 volunteers to the state and focused the national spotlight on Mississippi when the Klan murdered three Civil Rights workers.

"Moses pioneered an alternative style of leadership from the princely church leader that King epitomized," says Civil Rights historian Taylor Branch, author of *Parting the Waters*. "He was the thoughtful, self-effacing loner. He is really the father of grassroots organizing -- not the Moses summoning his people on the mountaintop as King did, but, ironically, the anti-Moses, going door-to-door, listening to people, letting them lead."

Now, nearly four decades after he left the state, Moses is back in Mississippi to work on what he sees as a second revolution: math literacy. Teaching algebra to descendants of sharecroppers doesn't involve the same danger as Civil Rights organizing. Indeed, Moses has received many official honors -- including the designation of a Bob Moses Day -- from the state that once branded him an "outside agitator." His new work is quieter but, he contends, potentially more radical.

"The absence of math literacy in urban and rural communities is as urgent an issue today as the lack of registered voters was 40 years ago," he says during a break between classes. "And I believe solving the problem requires the same kind of community organizing that changed the South then. If we can succeed in bringing all children to a level of math literacy so they can participate in today's economy, that would be a revolution."

Every Monday morning, Moses, now 67, leaves his home in Cambridge, Massachusetts, at 5:30 and takes a flight through Cincinnati to Jackson -- a seven-hour trip. He spends the next four days teaching ninth-grade algebra and geometry at Lanier. On Friday evenings, he makes the reverse trip to Cambridge.

Moses believes that mastering algebra, preferably by the eighth grade, is the modern-day equivalent of the right to vote because it represents a dividing line between having -- or not having -- a chance in life. "In the 1960s, we opened up political access," he says. "The most important social problem affecting people of color today is economic access, and this depends crucially on math and science literacy, because the American economy is now based on knowledge and technology, not labor."

It's easy to see why Moses considers higher math to be the key to economic equality. A study by the Department of Education shows that high school students who take rigorous math and science courses are more than twice as likely to go to college as those who don't. But the same study reveals that many minority and low-income students are steered away from such courses or attend schools that don't offer advanced math. As a result, many lack the skills they need to find decent work.

Moses began his new movement, the Algebra Project, when he was helping his own children with math 20 years ago. The nonprofit organization and its affiliates, based in Cambridge and Jackson, now have 22 full-time employees and an annual budget of \$2.5 million. It currently reaches 10,000 students in 13 states, the majority at middle schools in the South.

Moses has developed a special curriculum to make algebra more accessible to students, and his organization trains local teachers in his method. But what makes the Algebra Project unique among education-reform movements is its emphasis on grassroots organizing. Just as Moses did during the Civil Rights movement, project leaders work and live in the communities they're trying to change. Every school that offers the Algebra Project holds regular meetings to organize parents, students, teachers, and community leaders around math literacy the way Moses organized sharecroppers around the vote. "In the 1960s, people said sharecroppers weren't interested in voting until they stood up and demanded the franchise," he says. "Today the kids themselves are the only people who can dispel the idea that they don't want to learn."

Such a bottom-up approach is unusual among education reformers, who typically focus on hiring more teachers or boosting test scores. "Bob is in the trenches, building a culture around math that draws kids into his program," says Uri Treisman, a University of Texas math professor who is a national leader in efforts to improve the math performance of minority students. "It's an inspired notion -- and it works."

Moses draws students into learning algebra by starting with a simple physical event, like measuring wing-spans. Rather than simply asking children to manipulate mysterious symbols, he gives them a concrete experience to help them understand the concepts of math. The students then talk about the experience, isolate the features that are mathematical, and work with them.

In his classroom at Lanier, students have finished calculating the displacement of wingspans in their groups. Moses then asks them to write down what they did and why -- not just in numbers but in sentences. "Students need to learn to understand what the problems are about," he explains. As they work, Moses and Wilma Morris, a former Tougaloo College math professor who teaches the class with him, go from table to table asking questions. "Now what's the next step? What did you do? Where is your mean?" Porchia Jefferson has written a whole paragraph. "Mr. Moses, is this right?" she asks brightly. He reads her work and asks, "What is a displacement? What are we getting at here?" When he moves on to a different table, the girl sitting next to Porchia asks what he told her. "He said I wrote what I did but not what was meant," she says and starts over.

"Can I do this?" Ahmed Dortsch asks, coming up to Moses and showing him his calculations. Moses asks a few questions, and Ahmed goes back to his table. "I think I got it," he says, and shows another boy what he learned.

"He breaks it down for you to understand," Ahmed says of Moses. "Other teachers struggle with you, but he'll find your problem and get straight to it."

Other students put their heads on the table, stare into space, talk, crack jokes, slip over to other tables. Moses and Morris hone in on them. "Did you get your mean, Courtney?" "Shawn, have you done your calculations? You need to get started."

"I need a job," one boy comments.

"You have a job -- to train your mind," Moses responds.

Moses remains calm during these interactions. He does not raise his voice or express frustration, even when he sends a student to the principal's office for disrupting class. He answers questions deliberately, his eyes seeming to focus inward for answers, and he rarely smiles or laughs. Moses sees his students as inheritors of "the legacy handed down through the history of this country around the education of black people." He calls this legacy "sharecropper education" -- a limited education for people assigned manual work. Sharecropper education is not confined to the South, but also permeates inner-city schools in the North.

"If you think of sharecropper schooling, you went through it, but your options were you were going to chop and pick cotton or do domestic work," Moses says. "Your education wasn't tied to opportunity. The connection between education and a change for the better in your own life wasn't made."

Despite the Colin Powells and Condoleeza Rices, he adds, that link still is not clear among many poor African Americans because they do not see anyone they know whose success is tied to education. "The big question we need to address in this country today is, How do we shift the culture in our inner cities and develop these expectations and beliefs for these kids?"

Before he was a Civil Rights worker, Moses was a math teacher. Raised in a Harlem housing project, he attended Stuyvesant High School, which specialized in math and science, then Hamilton College in upstate New York, where he majored in philosophy and logic. He had received a master's degree in philosophy from Harvard University and was teaching math at Horace Mann, a private school in the Bronx, when the student sit-in movement drew him to the South. As one of the few black students in white institutions, Moses had learned to avoid confrontation and repress his feelings of humiliation. "I felt a great release when I began doing something to take on prejudice and racism," he recalls.

The Mississippi that Moses entered in 1961 was a closed society, with apartheid enforced by the law and the Klan. Within a few months of his arrival, Moses was beaten up by the sheriff's cousin when he accompanied two local blacks to the courthouse in a county where not a single black was registered to vote, and a local leader was shot and killed. People were afraid to challenge the status quo. "They were frozen," Moses recalls. What broke the ice, he found, were small workshops where sharecroppers and domestics talked about practical issues that bothered them, brainstormed about what to do, and took steps to do it.

"Bob never set us down and said, 'This is what you should do, or this is how you should do it,'" says L.C. Dorsey, a former sharecropper who attended the meetings. "He kept putting the questions out: 'Why do you think that is? What do you think we ought to do about that?' He'd listen to what you said and force you to think about it. That was his genius. He could hold his own ideas in abeyance and wait for you to finally develop the picture."

His refusal to lead in the traditional sense created a powerful organization -- but it also maddened people desperate for guidance and caused SNCC meetings to drag on into the night. Freedom Summer registered 75,000 blacks and elected representatives to oppose the state's all-white delegation at the Democratic National Convention. But the victory came at a heavy price. Four people were killed and 80 were beaten that summer,

the party refused to seat the black delegates, and the model integration among SNCC organizers fell apart in bitter arguments over race and black consciousness. Within a year, Moses left SNCC and the South.

"He was finely attuned to the implications of what they were doing," says Branch, the Civil Rights historian. "Would people be hurt? Was he leading them down a primrose path? His sensitivity could be seen as a weakness. King was more like General Sherman when his people were killed, and you need this toughness to keep going. It tore Moses apart." Moses, who dislikes talking about his feelings, sums up that period in his life by saying only, "It wasn't a happy time."

In 1968, when his draft board refused to grant him conscientious objector status, Moses left the country. He and his wife, Janet, a Civil Rights worker who now is a pediatrician, lived in Tanzania, where three of their four children were born and Moses taught math at a school where nobody knew his past. "I lived a life as just another person," he says. "That helped me get grounded again and helped our family be just a family."

What would become the Algebra Project began after Moses moved to Cambridge in 1976 and began work on a Ph.D. in the philosophy of math at Harvard. Freed from financial burdens by a MacArthur "genius grant," he was "fishing around for a kind of movement" -- and he found one that combined the two previous chapters of his life. Upset that his oldest daughter Maisha's middle school did not offer algebra, he asked the teacher to let her sit with him in a corner of the classroom and do more advanced math. The teacher asked if he would take a few other students too. Recognizing that many children were falling behind, Moses drew on the organizing skills he had honed in Mississippi to bring parents together. Within a few years, the school was offering algebra to all eighth-graders.

But Moses didn't stop with his daughter's school, expanding the project to other states. In the classroom, he noticed that some children had difficulty moving from an arithmetic understanding of numbers to an algebraic one. One student in particular kept getting the wrong answer because he didn't pay attention to whether the numbers were positive or negative. "He had only one question, the arithmetic question of 'how much?' I had to add another question you need for algebra: 'which way?'" From this insight, Moses developed the Algebra Project curriculum.

To add "which way" to "how much," Moses takes students on trips that make the concepts real for them -- the subway in Cambridge or a tour of Civil Rights landmarks in Mississippi. "On the subway, the first decision you are faced with is inbound or outbound," he says. "Then you get into how many stops." The students draw a trip line with any stop as the benchmark, which is assigned the coordinate zero. The stops to the left are assigned a negative value, to the right, a positive, so any trip represents a number of stops (how many?) in either direction (which way?).

This method of teaching math produces "aha!" moments even for some of the more experienced teachers trained in the Algebra Project. "When I went to the training, I began to understand math concepts I had only memorized, to be honest with you," says Lynn Moss, a former sixth-grade teacher at Brinkley Middle School in Jackson. "More than that, I learned an instructional practice -- starting with an experience -- that is so much more meaningful."

The innovative curriculum may excite students and teachers, but Moses knows that it's not enough, by itself, to turn schools around. For this, the Algebra Project relies on community organizing to try to produce a demand from the "target population" of students and parents for more math and better education. "People will not follow other people's agenda," Moses says. "Goals have to be internalized." He considers the "most strategic part" of his approach to be the Young People's Project, which mobilizes teenagers to run math camps and workshops for younger students. Some 70 students in Cambridge and Jackson tutor math on a regular basis, with another 40 helping in the summer camps.

The youth project is led by Moses' daughter Maisha, now 31, and son Omo, 30. During the week, Moses lives with Maisha and Omo in their ranch-style home on the outskirts of Jackson, and students involved in the project often meet here. Moses considers these teen-agers his real success stories, and whenever he speaks in public about the Algebra Project, he brings some of them with him to demonstrate math exercises. Just as the Civil Rights movement required African Americans to challenge not only the white power structure, but their own fears, the students who accompany Moses must push themselves to learn something well enough to stand up in public and explain it. "I used to say, 'Man, this is hard. I can't do this,'" says Jessie Sims, a 16-year-old. "When I finally stopped saying, 'I can't do it,' I started doing it." Another 16-year-old, Sylvester Davis, agrees. "I use what Mr. Moses does in my other subjects," he says. "Like I'm taking Spanish. Those verbs scare me. I think of what Mr. Moses says: 'Look at it. Apply what you already know.'"

One thing Moses didn't expect when he began the Algebra Project was that it would bring him back to Mississippi. He first returned to Jackson in 1989 after the release of *Mississippi Burning*, a movie about the murder of three Civil Rights workers during Freedom Summer. Distressed that the heroes in the movie are FBI agents, Moses and others met to discuss how to respond. At the gathering, he convinced Dave Dennis, another veteran of the movement, that math literacy is the contemporary Civil Rights issue.

Dennis, who'd become a lawyer in Louisiana, agreed to join Moses in bringing the Algebra Project to schools in the South. Moses began teaching classes at Jackson's Brinkley Middle School in 1996, and the following year he came to Lanier. At first, Moses says, his interest in returning to Mississippi was primarily strategic. "Because of the history, Mississippi is a theater where we can lift our program out of the 'let's teach math better' box and take it to the country as a Civil Rights issue." But when he began driving down the roads he had traveled decades earlier, the history became more personal. He made contact with the doctor who had stitched up his head after one beating and another doctor who had treated a fellow SNCC worker when he was shot. "I began to feel that this was a good place for me," he says.

Almost every week, Moses drives an hour and a half to the town of McComb to visit C.C. Bryant, the local NAACP leader who put him up when he first came to Mississippi in 1961. Bryant, now 85, still lives in the little yellow house where Moses stayed, though today it is located on C.C. Bryant Drive. Entering through the back door, Moses finds Bryant and his wife watching television. As they talk politics and exchange banter, Moses visibly relaxes, even breaking into laughter. His host knows the reason for the change. "When he comes here," Bryant explains, "he's comin' home."

When Moses isn't in Mississippi, he's often on the road, training teachers in his method, speaking at conferences on education reform, visiting university math departments, and lobbying to put math literacy higher on the national agenda. His book about the Algebra Project, *Radical Equations*, was published last year. He's equally driven in his spare time, maintaining a vegetarian diet, meditating regularly, and swimming 1,500 yards each day. He is known for following his principles even in minor matters. "You won't find Bob in a tuxedo even at a fancy fundraiser," says Harvard psychiatry professor Alvin Poussaint, a friend since childhood. "He sees this as a way the upper classes pull rank on the lower classes."

Poussaint, who serves on the Algebra Project board, says the organization once lost a research grant because Moses insisted community people be involved in designing the research to be funded.

The available evidence indicates that the Algebra Project works. An evaluation of four schools across the country conducted by researchers at Lesley University in Cambridge found that graduates of the program enroll in upper-level courses at a much higher rate than their peers, making it more likely that they will go on to college. Standardized-test scores improve at schools where at least half of all students learn math from Algebra Project-trained teachers. At Lanier, enrollment in geometry and advanced algebra has gone up substantially since Moses arrived, and his students surpass their peers on standardized tests. The school has now expanded the program to include all ninth-graders.

But despite the progress, the Algebra Project faces serious obstacles. Even with the special curriculum created by Moses, getting students to pay attention remains a problem. Enlisting parents and community leaders in the education of their children is also slow going. When Moses called a special meeting for parents at Lanier one evening, just 18 showed up. Clustered in one corner of the school's cavernous auditorium, the tiny group seemed to symbolize just how far Moses remains from his goal.

Everyone gives Moses high marks for his commitment, but some suggest that his methods and personality may not always be the most effective. One advanced math teacher at Lanier faults him for letting his students use calculators too much and not requiring them to do more math drills.

Other criticisms mirror those made against Moses in the 1960s. His insistence on including everybody in meetings -- and requiring meetings for just about everything -- can exhaust even the most faithful. "The more inclusive you are, the less efficient," says Stewart Guernsey, a lawyer who helps raise money for the project. Poussaint notes that "some people wish Moses would be more forceful." His speeches at fundraisers are often less than rousing and he dislikes socializing with wealthy donors, making it harder for the project to raise money.

Moses responds to such criticism by doing exactly what he's been doing for 40 years -- listening to people no one else listens to, asking probing questions in the hope that they will figure out what's wrong and take it upon themselves to improve their lives. One afternoon, a student he had suspended comes in with his mother to see him after school. "Mothers seem to be the one place where there's a real connection," Moses explains. As the three of them sit at a table in the empty classroom, the boy looks subdued. Moses explores in a tone of inquiry, not judgment, why the boy wasn't paying attention. If you couldn't see what I was doing, why didn't you move? he asks. Why do I have to keep after you? What are your plans after high school? Do you have a backup plan if the NBA doesn't work out?

After that, Moses spends an hour patiently going over, step by step, the wingspan exercise.

Bob Moses

The Nation – July 21, 2003 issue – By Tom Hayden (posted July 2, 2003)

Late one night in October, 1961, I flew from Atlanta to Jackson, Mississippi, with Bob Moses. We didn't sit together during the silent one hour flight, nor did we make eye contact at the empty airport. Not that it wasn't legal. You simply wouldn't take the chance. The next day, with my late friend Paul Potter of the National Student Association (NSA), I rented a car and drove two hours south from Jackson to McComb, a staunchly-segregated town of 12,000 thousand, not far from Mississippi's southern border. There we arranged to meet Bob Moses by pulling up to a gas station parking lot with our lights out, changing cars, lying low in the back seats, and finally being smuggled into a basement room with blankets covering on all the windows. There we discussed the voter registration drive and freedom school opening in town. This was shortly after the Freedom Rides had shaken Mississippi and the Deep South, exposing the violence that awaited any who challenged the segregated status quo. At the time, Attorney General Robert Kennedy wondered aloud if the Freedom Riders "have the best interest of the country at heart" since they were providing "good propaganda for America's enemies". The New York Times editorialized that "nonviolence that deliberately provokes violence is a logical contradiction". A Gallup Poll that summer revealed that 63 percent of Americans opposed the Freedom Rides.

Of course, patience was in the eye of the beholder. It was 100 years since the beginning of the Civil War, 100 years since the imposition of Jim Crow laws, and 13 years since Democratic Party liberals like Hubert Humphrey had adopted a civil rights platform. And still, people were being killed for registering to vote, as recently as September 25, when a farmer named Herbert Lee was shot in broad daylight by a white Mississippi elected official. A witness to Lee's murder, Louis Allen, became a marked man; he was killed two years later.

Bob Moses took Herbert Lee's death personally. Lee had drawn venomous racist attention by driving Bob around the back roads looking for volunteers. Bob himself was badly beaten on the head and face by the son-in-law of the man who shot Herbert Lee. Beatings of other civil rights workers became routine. The institutions of liberalism were powerless to act. Officials of Robert Kennedy's Justice Department, on Moses' invitation, clandestinely visited Mississippi sharecroppers to see for themselves. They urged Moses to leave Mississippi because they couldn't, or wouldn't protect the voter registration effort. Institutions like the black churches and the NAACP lacked the independent strength for such campaigns. To organize for elementary rights, one had to learn the solitude of expecting to die.

In these conditions, people like Bob learned about organizing inside what they called "the iceberg". Bob was raised in the North, attended Hamilton College and Harvard graduate school in the Fifties, visited Zen centers in Japan, and was teaching at Horace Mann school when the sit-ins and freedom rides erupted in 1960. After a volunteer stint at Martin Luther King's New York office, he traveled south to join a three-member civil rights office in Atlanta. Then he took an exploratory bus trip through the Black Belt, finally being drawn to rural Mississippi. Among stalwart black sharecroppers, Bob began to evolve a new model of how things work. In the orthodox model, institutions are supposed to represent and defend organized constituencies. But along the way they became frozen in the iceberg themselves. The people they were supposed to represent were frozen too, Frozen by fear of white violence. Frozen by feelings that they didn't count in the big picture of things, and above all by feelings that they were unqualified to participate in government. Democracy was meaningless where so many people were powerless psychologically.

So Bob listened. When people asked him what to do, he asked what they thought. At mass meetings, he usually sat in back. In group discussions, he mostly spoke last. He slept on floors, wore sharecroppers' overalls, shared the risks, took the blows, went to jail, dug in deeply. Gradually the ice melted, the rock of hope was revealed. People were empowered for the first time. Radicals of that era advocated a strategy they called "political realignment", which meant the fashioning of a liberal Democratic Party by breaking the connection with the party's racist Dixiecrat wing. The notion had seeped into Bob's thinking too, with the difference that he really

meant to make it happen. Not through the endlessness of gradualism, but by boiling the iceberg. Not because it was some ideological dream, but because black people needed leverage against the structure of fear.

So Bob continued trying to educate the Justice Department to the necessity of breaking the link with segregation. But the results never led to breakthrough. For example, the Kennedys were persuaded to encourage foundation funding for voter registration drives, as an alternative to radical direct action, but they wouldn't replace segregationist judges or protect civil rights workers on the front lines. Louis Allen was found murdered in Amite County while SNCC was holding a strategy meeting on what to do next. It was plain that the movement couldn't protect those it encouraged to stand up. Bob knew that getting the Justice Department on the phone, or bringing national figures like Harry Belafonte, Dick Gregory and Bob Dylan to Mississippi was at least partial protection against the reign of terror. His budding idea was to force the nation, at least north of the Mason-Dixon line, to share the terror and finally take a stand on Mississippi. Even when President Kennedy made a personal civil rights appeal on national television in June, a sniper killed NAACP leader Medgar Evers in front of his family in Jackson.

Not long after, JFK himself was killed, and the whole country suddenly felt more like Mississippi. But in the same month as the Kennedy assassination, 90,000 blacks in Mississippi shed their fears to cast a "freedom vote" protesting their exclusion from the democratic process. It was an underground vote, like an underground railroad, demonstrating that some freedom was in the air. The project that Bob had built was becoming an alternative structure exposing and chipping at the iceberg. In spring and summer of 1964 came the Mississippi Freedom Democratic Party and Mississippi Summer. The new party would challenge the credentials of the state's official delegation at the National Democratic Convention, while hundreds of northern, mostly-white volunteers would enter Mississippi to work in "freedom schools" and registration projects.

While the 1964 Summer Project participants were training in nonviolence before leaving for Mississippi, word came on June 21 that three civil rights workers were "disappeared" in Neshoba County, James Chaney, Andrew Goodman, and Mickey Schwerner. Bob had the burden of breaking the news. No one backed down. FBI Director J. Edgar Hoover told the the President that the missing activists might have staged their disappearance to inflame the situation, or perhaps that "these three may have gotten rather fresh" with the locals. In Mississippi that summer, there were 30 bombings, 35 church burnings, 35 people shot and 80 beaten up. But the Freedom Democrats continued growing toward the goal of sending an alternative, legal, racially-open delegation to challenge the official Dixiecrats at the Convention. It was the most significant model of participatory democracy built in the Sixties. The project was the brightest alternative to the war, violence and repression that was building just beyond our knowledge. If the cause of the Freedom Democrats was taken up by the Democratic Party, the rhetoric of political realignment would have turned into reality, and the War on Poverty would have become the priority instead of War in Vietnam. It was not to be.

On August 2, the US government fabricated an incident in the Gulf of Tonkin ("a very delicate subject", said Pentagon chief Robert McNamara), thus starting the Vietnam war. While LBJ prepared his subsequent war declaration on August 4th, the FBI found three brutalized bodies in a Neshoba County swamp. During an August 9th memorial service at the burned-out Mt. Zion church, Bob Moses questioned how the US could fight for freedom in Vietnam but not in Mississippi. On August 20, LBJ declared an official war on poverty with a \$947 million appropriation while also signing a defense augmentation of \$50 billion. While the Freedom Democratic Party buses headed for Atlantic City, where the convention was held along a garish boardwalk, LBJ plotted to employ the party's leading liberals to undermine the FDP challenge. Hubert Humphrey, the hero of the 1948 civil rights debate, was dispatched to stop these Mississippi black people from taking the promise too seriously. The Humphrey plan encountered trouble as plain Democratic delegates from northern states were moved by the eloquent testimony from sharecroppers like Fannie Lou Hamer. Humphrey lectured the arriving Freedom delegation that LBJ "will not allow that illiterate woman to speak from the floor of the convention". Walter Reuther, leader of the United Auto Workers, was flown by private jet to help quell the Freedom challenge,

hoping that Johnson would nominate Humphrey as vice president. "We can reduce the opposition to this to a microscopic fraction so they'll be completely unimportant", he pledged.

The Humphrey compromise failed to meet the test of either participatory democracy or political realignment. It boiled down to offering two delegate-at-large seats to the Freedom Democrats while seating the official segregationist party and promising to reform the process four years later. "We didn't come all this way for no two seats", said Mrs. Hamer. We came to bring our morality to politics, not politics to our morality, said Bob. Humphrey, "having used all the heartstrings I had" (as he forlornly explained to the President) broke down and cried. At one point, LBJ stole off to bed in the afternoon, vowing for 24 hours to quit the presidency. Only days after the convention, LBJ's national security advisor McGeorge Bundy opined that the President would have to send "substantial armed forces" to Vietnam Yet Johnson already had pledged "no wider war".

The possibility of transformation was gone. In hindsight, if Johnson had conceded a meaningful voice to the Freedom Democrats, he still would have defeated Barry Goldwater that November. But he heeded the plea of those like Rep. Carl Vinson who told the President "we just cannot take any more civil rights advocates now". How consciously we may never know, but Johnson was heading for the war that would prove disastrous for himself, the Democratic Party and the country. One year later, when Johnson signed the Voting Rights Act after the bloodshed at the Selma bridge, it already was too late. The fires that began in Watts the summer after Freedom Summer would blaze through 500 northern ghettos in the next three years. Bob was deeply wounded by the betrayal. He had, after all, followed the rules, registered voters, built a local and state party organization, made a thorough legal case to the credentials committee, all the while putting lives at risk. It was a remarkable organizational achievement, turning "the stones the builders rejected" into polished gems of community leadership. Beyond anyone's expectation, Bob out-organized Lyndon Johnson who, conceding that the convention delegates would support the Freedom Democrats, simply made sure no floor vote happened. But the battle was lost, and Bob told me it might take 50 years before it could happen again. After a while, he dropped his burdensome last name, becoming Bob Parris. He took part in the earliest anti-Vietnam demonstration in Washington, traveled to Africa, escaped a draft order, taught school under asylum in Tanzania.

Bob ultimately returned to the Harvard area with a MacArthur Fellowship. In the Eighties, he began a Math Project modeled on the early freedom schools, using participatory techniques to help black youth avoid disenfranchisement in the computer age as their parents had experienced in the industrial age. The last time I saw him was in the Nineties, on another flight to Mississippi for a reunion of the 1964 volunteers, where I was deeply moved to sit on the floor and listen to so many of the movement's grown-up children, including Bob's, take part in freedom circle discussions of their own. Bob would deny credit for these Sixties organizing achievements, and rightly so, since the effort depended on thousands of self-determined community people and organizers. But Bob was the catalyst and the example. He helped the whole country look in the mirror and confront itself. If the country sought to escape what it saw, there was nothing Bob felt he could do.

Some say he was more a mystic than an organizer. If so, he was the most practical mystic I ever met. He was an organizer of organizers who organized people to free themselves of organizers. The legacy of Freedom Summer continued from Vietnam Summer in 1967 to labor's Solidarity Summer in the late 90s. Others say Bob's style was too decentralized, too anarchistic, that he and SNCC should have built lasting institutions. But the hard truth is that even well-meaning institutions wear out the spirit and become accommodated to the status quo. Of course, we need them dearly, but no institution ever aroused the degraded poor with a membership application. Only a prophetic organizer can do such work, as seen in the base communities of liberation theology, the underground efforts of anti-sweatshop organizers, the dangerous struggles of women against fundamentalism, and the brave souls slowing rainforest destruction today. "Maybe you did come only to boil and bubble and burst out of sight and sound", Bob himself once said. That seems enough for one life.

Educator-activist Robert Moses calls for federal education reform at Ithaca community forum

Cornell University News Service – June 10, 2005 – By Daniel Aloï

ITHACA, N.Y. -- Veteran civil rights activist Robert Moses encouraged educators, parents and students to join a national debate and a movement for change in public schools in a community forum held June 7 in the Ithaca High School cafeteria. The second Community Forum on Education and Society, titled "Equity and Excellence: Quality Education as a Civil Right," was presented by Cornell University in partnership with other local educational institutions. "We should ask this country to pass a Constitutional amendment that says every child in the country is a child of this country ... and is entitled to a quality public school education," Moses told an audience of about 150, including more than 80 central New York educators. The aim, he said, is "to raise this issue to the federal level." Moses also related the proposed amendment to his work in the 1960s with voter registration in Mississippi and Alabama, as a member of the Student Nonviolent Coordinating Committee. "This is what we called in the civil rights movement 'working the demand side of the problem' -- getting the people to demand their rights," he said. "If we learn how to demand them, then we can begin to change things in this country."

As he invited the members of the community to discuss his proposal, Moses advised them to have a reasoned debate. "This is an issue that goes to the heart of teaching," he said. "We need to have intellectual empathy or accurate empathy -- that is, we all need to feel safe in this discussion. Race is not a topic in this discussion, nor is class." His mention of the Scholastic Aptitude Test (SAT), however, brought those topics to the fore in comments by local students. Some voiced concerns over the SAT being culturally biased and limited to only certain skills, and other issues such as being the only person of color in honors classes. Educators and parents also spoke up. "We are taking the time to teach kids about classism and capitalism," said Meggin Rose, a reading teacher at Ithaca's Lehman Alternative Community School, in her impassioned turn at the microphone. "Educating is teaching people to find success and not to impose it on them."

In 1982, Moses founded the Algebra Project, a national mathematics literacy program for low-income students and students of color in middle schools. Moses and Cornell professor of mathematics David Henderson are currently working together on a proposed high school curriculum for the program. Local teacher Jeff Claus said educators should think "more in terms of equal outcomes" rather than equal opportunity. "The thing I love about the Algebra Project is it has found very rich, quantitative, meaningful ways to help [students] to succeed and achieve," Claus said. "I was impressed with Dr. Moses' ability to stimulate discussion, and then weave into that discussion, useful information and perspectives," said Stephen Hamilton, associate provost for outreach at Cornell, whose office organizes the community forum series. "His manner was understated and very respectful, and yet the authority of his experience and his wisdom comes through."

Introducing Moses, IHS Principal Joe Wilson said he had seen his work in action while at a previous post. The 1,400 Algebra Project students and tutors at Baltimore's City College not only "improved dramatically in use of mathematics" but became publicly involved in ensuring the program would continue, he said. Moses also signed copies of his book, "Radical Equations: Civil Rights from Mississippi to the Algebra Project," which he co-authored with Charles E. Cobb. During his visit to Ithaca, Moses also led workshops for BOCES and Ithaca City School District mathematics teachers; attended a community dinner at the Greater Ithaca Activities Center, where he talked with young people about the civil rights movement; and visited Cornell's newly renovated Africana Studies and Research Center and Sage Chapel, where a stained glass window memorializes slain Mississippi civil rights workers Michael Schwerner (Cornell '61), James Chaney and Andrew Goodman. The Community Forum on Education and Society is held twice each school year. The first event, "Shared Challenges, Shared Opportunities," a discussion of how gender, race and class affect education, was conducted in December 2004 at Cornell's Statler Hotel with 120 participants, including a cross-section of students and community members. Partners in the second forum were the Ithaca College Center for Teacher Education, The Village at Ithaca, the Ithaca City School District (ICSD), Tompkins-Seneca-Tioga BOCES and the Ithaca Public Education Initiative.

35 Who Made a Difference:

Robert Moses – A former civil rights activist revolutionizes the teaching of mathematics

Smithsonian Magazine – November 01, 2005 – By Neil Henry

Robert Moses finally finds a moment to return a reporter's phone call on a hectic afternoon. He's standing outside a rural grocery store near Beaufort, South Carolina, getting ready to deliver a speech about equal opportunities for disadvantaged American kids. "It's all about organizing. It's always been that way," Moses, a recipient of a 1982 MacArthur "genius" award, says in a measured tone as he waits for his wife, Janet, to pick up a few supplies in the store. "And making sure that people's demands are consistently heard, whether it's the right to vote in the old days or the right to a quality education today."

Moses is 70 now, but his voice sounds as impassioned as ever. The Harlem-raised, Harvard-trained math educator first traveled to the South 44 years ago. As a field director of the Student Nonviolent Coordinating Committee, he risked his life several times to help register blacks to vote. In 1964, Moses also helped plan what came to be known as Freedom Summer, when activists who included white Northerners and university students went to Mississippi to register rural black voters.

Milestone reforms that that effort sparked, such as the Voting Rights Act of 1965, allowed black Americans to enjoy rights that were promised under the Constitution. But entrenched poverty and other inequities have continued to occupy Moses. Although his field of operations has certainly changed, in some ways he has never left "the movement" at all. When writer Bruce Watson visited him nearly a decade ago for *Smithsonian*, Moses was immersed in something he called the Algebra Project, an innovative initiative to teach math literacy to poor and minority students at the middle- and high-school levels in the rural South and the nation's inner cities. Seeking to redress the failures of many public schools, the project aimed to prepare students for college and future employment in a society where, Moses believes, proficiency in science and math are key to "successful citizenship." He has used everything from gumdrops to music and rides on the subway to make mathematics more fun and more accessible. By 1996, the project had reached some 45,000 pupils, and its instructional materials were being used by teachers in 105 schools across the country. But over the past decade, Moses says, the nation's educational priorities have shifted to emphasize test results and teacher accountability, leaving approaches such as the Algebra Project strapped for funds. Its 2005 operating budget of roughly \$1 million—from federal and private sources—is only about a quarter of what it was in 2000.

Today, Moses teaches classes in trigonometry and introductory engineering to 43 students at Lanier High School in Jackson, Mississippi. He wants his charges to enter college on an equal footing with their more advantaged peers. "I do still think of it the same way I felt about the voting rights struggle," he says. "Back then, the common belief was that black sharecroppers weren't smart enough to vote and didn't care about voting. But that mindset certainly changed when thousands of sharecroppers began to appear at the polls. Their demands helped force change. I think a similar strategy will succeed in education."

These days, he says, "it's the grandchildren and great-grandchildren of the people who were gridlocked in previous generations who are key" to stemming the crisis in school dropout rates. Moses is also campaigning to pass an amendment to the U.S. Constitution, guaranteeing every child in America the opportunity to receive a quality public education. "We had our first meeting in March at Howard University and expected maybe 30 people to show up. But we actually got more than 130," he says of the Quality Public School Education as a Civil Right campaign.

Does he feel demoralized by the slow pace of change? "No," he answers. "I think there still operates a belief at a deep level in this country in the idea that if kids can do it, they should be given an opportunity to do it. That belief keeps one optimistic. So I don't become too distracted by the pace. You can live a good life in this country, but struggle is also a necessary part of it. That's how I see my life."

The Civil Right to Radical Math

U.S. News & World Report – October 22, 2006 – By Diane Cole

Harlem-born, Harvard-educated Robert Moses is a radical in the most traditional definition of the word: He goes to the root of the problem.

First as a civil rights leader and now as an advocate for the poor and founder of the math literacy program the Algebra Project, Moses has looked at the ideal of equal opportunity and compared it with the reality-then set about balancing the equation.

In the 1960s, that meant leading voter registration drives in Mississippi, even if it led to pistol-whipping by white supremacists and the murders of colleagues who had marched alongside him. Staying with the work was the only way he could make sense of the injustice-and he has continued to stay, just in another mode.

In 1966, he left for Canada when, at the age of 31, he received a draft notice. After a stint teaching math in Tanzania, he returned to the United States when President Jimmy Carter granted amnesty to draft resisters. Soon after, he started working on a different formula for breaking down racial and economic barriers: teaching inner-city kids math-algebra, to be precise.

As Moses explains it, the connection between civil rights and the right to math literacy is logical. The civil rights movement ensured that minorities had a voice; now they needed economic access-and that started with education, specifically the math and science skills essential to succeeding in a tech-dependent society.

Connecting

The Algebra Project, at its peak, has provided help for some 40,000 minority students annually, in the form of kindergarten-through-high-school curricula guides, teacher training, and peer coaching. "I've been in the classroom and watched these students ... soar and grow," says actor Danny Glover, an Algebra Project board member.

These days, Moses divides his time between Jackson, Miss., and Miami, where he teaches high school math. His son Omo, who runs an Algebra Project offshoot, says Moses "has always been able to connect with young people. He's never embarrassed or uncomfortable; he'll try a math rap song, share his lunch, or sit on a bus with 50 students on a spring break trip," he says. "He has a genuine interest in them as people."

Despite a packed travel schedule, Moses gives no visible sign of fatigue. A vegetarian of long standing, he practices yoga regularly and tries to swim at least 1/4 mile daily. He portrays an aura of stillness that suggests that he'd rather listen than speak.

Introducing Moses at a recent conference, Shirley Ann Jackson, the president of Rensselaer Polytechnic Institute, commended Moses for "getting to the heart of the issue," which, as a physicist, she knows well: "You can't do calculus, physics, or engineering if you can't do algebra," she points out-which is exactly the point and why Moses originally founded the Algebra Project.

It was 1982-the year that Moses won a MacArthur Foundation genius grant-and Moses was completing his Ph.D. in philosophy at Harvard. His oldest daughter, Maisha, entered eighth grade, ready for algebra-only to discover that the local public school did not offer it. Moses, who had taught math decades earlier at New York's Horace Mann High School, was determined that Maisha would take algebra-even if he had to teach it at the school himself. Which he did.

Algebra, Moses perceived, was a "gatekeeper" subject: Without it, middle school students couldn't advance in math, technology, and science. And without those courses, they wouldn't be able to meet the requirements for college.

So far, research has judged the Algebra Project a success. At Lanier High School in Jackson, 55 percent of the students following the project's curriculum passed the state exam the first time, compared with 40 percent of students in the regular curriculum. At junior high school sites, Algebra Project students scored better on standardized tests and went on to more advanced math classes at significantly higher levels than other schoolmates.

In part, the success is due to innovative curricula (developed by Moses) that translate the abstract language of algebraic equations into understandable, concrete activities. Moses also employs his leadership lessons from the civil rights movement. "You can't make change on a large issue just by advocating from the top," he says. "It has to be a demand from the bottom. That means building grass-roots networks pushing that demand forward." It means working within the community, he says, with families and students and schools

A Listener

Another way to put it is that Moses is always listening to the community. "I got into the habit of listening as a youngster," Moses says, explaining that he would tag around with his father and "hear him talk about events of the day from the point of view of the little guy."

Later, in Mississippi, civil rights leader Ella Baker set another example. "I don't know how many meetings I sat through with her not saying anything, not contravening," he says. She taught him the importance of "creating a space where someone else can step in and lead," he says. "There had to be a real laying down of the groundwork," a sense of participation that allowed people to direct the movement themselves.

And then, after Moses has listened long and hard and intently, he speaks, in a gently modulated voice that hits its target all the more powerfully for being so understated. In that regard, "Bob is like an alligator," says Timothy Jenkins, past president of the University of the District of Columbia and a longtime civil rights activist. "He might seem passive, but he's incisive. What he says is considered-and people listen."

Just the way they have been listening for 40 years and counting-and perhaps years beyond counting, as his algebra lessons grow exponentially from student to student, generation to generation, and from equations to equality.

Audience becomes discussion group as educator Moses raises question of quality education as a civil right
Cornell University Chronicle Online – Feb. 2, 2007 – By Zheng Yang

What many expected to be a standard lecture by Robert Parris Moses turned into a giant group discussion last week as the activist and educator encouraged audience members to contribute their views on education, civil rights, racial discrimination, privatization and critical-thinking skills.

The Jan. 29 public lecture, "Quality Education as a Civil Right," was Moses' first as the Frank H.T. Rhodes Class of '56 Professor. Cornell President David Skorton served as the moderator for the lecture-turned-workshop in the Statler Auditorium. Thirty-two people from an audience of 600 engaged in the discussion.

Moses is a Harvard-trained educator, a civil rights leader, a MacArthur Foundation fellow and founder of the Algebra Project, an innovative math literacy program originally developed for inner-city youth in Boston.

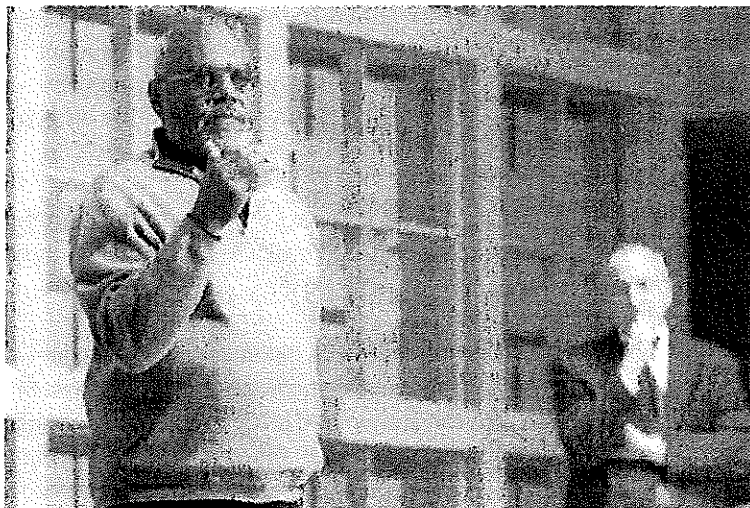
Moses suggested the necessity for a constitutional amendment to promote quality public school education. He then asked the audience for their own opinions.

"We need public persons to participate in public discussions to steer our country in a specific direction," he said.

In the same vein, Moses reminded the audience that the Constitution does not say "We the President, We the Congress or We the Supreme Court." He urged the participants in the workshop to think of themselves as "We the people," and called for "a national conversation about how we should educate our young people."

The audience responded warmly to Moses' open dialogue format. Some questioned the exact meaning and purpose of a quality education; others suggested that today's public schools are more concerned with fulfilling test requirements than with real learning; or that capitalism is the fundamental cause of the discrepancy between public and private school education. Throughout the discussion, quality education was framed as a civil right, an economic right, a democratic right and a basic human right. Many participants expressed concerns over the stifling of creativity in public school education -- an idea challenged by a public school teacher who argued that teaching critical-thinking skills is a priority among her colleagues.

One Cornell undergraduate, about to start teaching math in a middle school, said she was shocked when a student told her, "This doesn't matter. Even if I get my GRE, I'll still end up at the same place." This experience shaped her belief in a need to "fight for equality." A lack of quality education in public schools does not occur "randomly," the student added, but because "we have a system that disenfranchises certain groups and puts people into categories." Another participant told the audience about her mother, who raised four children while working full time and studying toward a Ph.D. in psychology. "Blacks don't get their civil rights by sitting there," the speaker said. "We walk until our feet are bleeding. So stop talking, and start doing."



Lindsay France/University Photography

Robert Parris Moses, left, speaks on "Quality Education as a Civil Right," in his first presentation as a Frank H.T. Rhodes Class of '56 Professor. President David Skorton, right, served as moderator for the lecture-turned-workshop Jan. 29 in Statler Auditorium.

The 50th Anniversary of the Civil Rights Act of 1957 and its Continuing Importance
Testimony: United States Senate Committee on the Judiciary – September 5, 2007
Robert P. Moses

CONSTITUTIONAL PEOPLE
WRITTEN TESTIMONY SUBMITTED
TO THE UNITED STATES SENATE JUDICIARY COMMITTEE
BY ROBERT P. MOSES
TUESDAY, SEPTEMBER 4, 2007

In 1749, A West African boy, nine years old and captured, sailed the middle passage to Virginia and survived. In August of that year, a Scottish born merchant slave trader, twenty-four years old and up and coming, peered into the pluck of that nine year old and bought him. Stewart took Somerset as his personal slave.

Twenty years passed, and twenty-nine year old Somerset accompanied Stewart to London to help care for his sister's family when her husband died. Two years passed and Somerset, while running errands everywhere for his master, meeting blacks on the streets, in the stores, along the docks, crafted a way out of slavery and bondage. He arranged to be baptized as James Somerset, acquired two English Godparents, Thomas Walkin and Elizabeth Cade, and flowed into the "IRS," London's stream of Insurgent Runaway Slaves. Stewart, feeling "betrayed and publicly insulted", posted notices and on Nov. 26, 1771, slave catchers delivered Somerset to a ship bound for Jamaica. Seven days later, Somerset's Godmother, petitioned the oldest and highest common law court in England, for a writ of Habeas Corpus to release James Somerset.

Lord Mansfield, the Chief Justice of King's Court, issued the writ and six days later, on December 9th, 1771, James Somerset appeared before the bench where a Captain Knowles declared:

Charles Stewart, a colonial from America, deposited his slave, Somerset, aboard the Ann and Mary, to be sold in Jamaica. (1)

Lord Mansfield released Somerset pending a hearing.

On June 22nd, 1772, the clerk called the case of "James Somerset, a Negro on Habeas Corpus" and Lord Mansfield mounted the bench, bewigged, and delivered his judgment:

The state of slavery is of such a nature, that it is incapable of being introduced on any reasons, moral or political ... it's so odious, that nothing can be suffered to support it but positive law. Whatever inconveniences, therefore, may follow from the decision, I cannot say this case is allowed or approved by the law of England; and therefore the black must be discharged. (2)

The issue reached across the Atlantic into Colonial Revolutionary America, where colonialists who could not imagine their slaves as Constitutional people would require an explicit declaration of "positive law" to protect the Nation to be.

There is a 'Somerset clause' (3) in the Nation's Constitution: Article IV, Section 2, paragraph 3. At the 1787 Constitutional Convention discriminating men, determined to establish a "workable government", peered through the cataracts on their imaginations to brand the IRS as Constitutional Property:

No person held to service or labor in one state, under the laws thereof, escaping into another, shall, in consequence of any law or regulation therein, be discharged from such service or labor, but shall be delivered up on claim of the party to whom such service or labor is due. (4)

The IRS with their insurgencies of independence and freedom shadowed the colonialists with their declarations of independence and freedom into the Constitutional Nation; insurgencies which, over the ensuing decades, sabotaged the "workable government", helping to induce its destabilization into Civil War.

In 1787, after the Revolutionary War, leaders at the Constitutional Convention established a "workable government" that assumed slavery, but floundered in the mud of Civil War. In 1877, the traditional mid-point of the Nation's history, leaders of the National Democratic and Republican political parties established a "workable government" that would assume Jim Crow:

Jim Crow laws, unlike feudal laws, did not assign the subordinate group a fixed status in society ... They were constantly pushing the Negro farther down ... Its spirit is that of an allabsorbing autocracy of race, an animus of aggrandizement which makes, in the imagination of the white man, an absolute identification of the stronger race with the very being of the state. (5)

When the Mississippi legislature failed to ratify the Fourteenth Amendment, which welcomed freed slaves all at once as citizens of the Nation and of their respective States, the Republican U.S. Congress placed it in the Fourth Military district under brevet major general Adelbert Ames.

In 1870 the U.S. Congress passed the Fifteenth Amendment establishing the right of citizens of the United States to vote and in 1873, Adelbert Ames was elected governor of Mississippi. But by then the massacre of the Negroes of Colfax Louisiana on April 13, 1873, along the banks of the Red River pointed to the direction the South would lead and the Nation would follow.

The Colfax violence against black elected officials spread into Mississippi in the municipal elections of 1874 in Vicksburg.

In February 1875, a Congressional committee reported on its investigations into the election in Vicksburg in 1874. The minority report filed by Democrats noted:

A little learning is a dangerous thing in its application to Negroes. The educated among them are the most dangerous class in the community, as they exercise a malign and blighting influence over the future prospects of their race. (13) (6)

The majority report, filed by Republicans challenged the Nation directly:

by the exercise of all its power, if needed, secure to every man, black and white, the free exercise of the elective franchise, and punish, sternly and promptly, all who violently invade those rights; (7)a

In 1875, the Democrats took over the State legislature. The following summer the Senate select committee came to Mississippi and took testimony all over the state and issued the Boutwell Report. A quarter of a century later, in his memoirs, Senator George Boutwell of Massachusetts remarked:

"For myself I had no doubt that the election of 1875 was carried by the Democrats by a preconceived plan of riots and assassinations." (15) (8)

What followed was the national political compromise of 1877:

...the Democrats agreed to let Hayes (The Republican Governor of Ohio) become president and the Republicans agreed in return to remove the remaining federal troops from the South. Reconstruction, which had wound up producing a lower-intensity continuation of the Civil War was over. The South had won. And the events in Mississippi in 1875 had been the decisive battle. (19) (8)

Three decades later, in 1907, Senator Benjamin Ryan "Pitchfork Ben" Tillman of South Carolina took the floor of the Senate to memorialize the execution of Mississippi's plan

It was then that 'we shot them'; it was then that 'we killed them'; it was then that 'we stuffed ballot boxes'; it was a fight between barbarism and civilization, between the African and the Caucasian, for mastery. (16) (9)

In the early darkness of a winter evening in February 1963, Jimmy Travis slipped behind the wheel and Randolph Blackwell crowded me beside him in a Snick Chevy in front of the Voter Registration Office in Greenwood Mississippi to take off for Greenville on U.S. 82 straight across the Delta. Jimmy zigzagged out of town to escape an unmarked car, but as we headed west on 82 it trailed us and swept past near the turn off for Valley State University, firing automatic weapons pitting the Chevy with bullets. Jimmy cried out and slumped; I reached over to grab the wheel and fumbled for the brakes as we glided off 82 into the ditch, our windows blown out, a bullet caught in Jimmy's neck.

After Jimmy caught that bullet in his neck, Snick regrouped to converge on Greenwood and black sharecroppers lined up at the Court House to demand their right to vote. When Snick field secretaries were arrested, Burke Marshall, the assistant attorney general for Civil Rights under Robert Kennedy, removed our cases to the Federal District Court in Greenville and sent John Doar to be our lawyer. From the witness stand I looked out at a courtroom packed with black sharecroppers from Greenwood, hushed along its walls, packed onto its benches, and attended to the question put by Federal District Judge Clayton: "Why are you taking illiterates down to register to vote?" To whom had he put his question? The sharecroppers? Perhaps. But perhaps it was his own silent observation dressed as a rhetorical question:

Constitutional strangers are pressing against the Constitutional gate.

The 1957 Civil Rights act provided the Constitutional space within which we did our work. Mississippi could lock us up, but it couldn't throw the key away. I understand now that we were working in a context of Constitutional permissiveness:

SNCC was permitted to work on Voter Registration Terrorists were permitted to gun us down Mississippi was permitted to lock us up The Civil Rights Division of the Department of Justice was permitted to set us free. None of the above was required by the Constitution, or for that matter, forbidden.

Burke passed in the summer of 2004 and his family asked if I would say something at the memorial for him at the Yale Law School that fall. I tracked down a book he published in the summer of 1964, "Federalism and Civil Rights". In it Burke quotes a Lincoln County Judge who described Mississippi's constitutional condition in a speech to the state's 1890 Constitutional Convention:

"Sir, it is no secret that there has not been a full vote and a fair count in Mississippi since 1875, that we have been preserving the ascendancy of white people by revolutionary methods. In plain words, we have been stuffing ballot boxes, permitting perjury here and there in the state, carrying elections by fraud and violence until the whole machinery for elections was about to rot down." (12) (10)

At the Delta town of Indianola, in the spring of 1955, in the aftermath of the 1954 Supreme Court School desegregation decision, Brown vs the Board of Education, Mississippi launched its second plan: The White Citizens Councils launched the doctrine of massive resistance to the Court's decision. However, a few years later, in 1960, their plan to maintain Jim Crow met its "nemeses":

1960 was the year of the massive awakening for the Negroes of the South – indeed Negro Americans generally ... On 1 February of that year four Negro college boys, freshmen at the Agricultural and Technical College in

Greensboro, North Carolina, asked politely for coffee at Woolworth's lunch counter and continued to sit in silent protest when refused. The 'sit-in' nemesis of Jim Crow was born. (8) (11)

At a meeting on the campus of Shaw University in North Carolina, Ella Baker helped fashion a space for untapped sit-in insurgents to think for themselves, to make their own plans, to execute their own strategies:

In April the SNCC (Student Nonviolent Coordinating Committee) was formed – small, militant, very youthful, largely Negro, and Negro-led ... Negroes were in charge of their own movement now and youth was in the vanguard. (9) (12)

That summer, Jane Stembridge and Ella sent me on a scouting trip through Alabama, Mississippi and Louisiana. I met Fred Shuttlesworth in Birmingham, Aaron Henry in Clarksdale, Medgar Evers in Jackson and Dr. Gilbert Mason in Biloxi, but it was Amzie Moore in the Mississippi Delta who was waiting with a plan to channel the energy of the Snick insurgents and turn Mississippi around: No one in Mississippi understood Jim Crow better than Amzie.

Amzie's world was to become my world, but first I had one year to go to complete a three-year contract teaching middle school math at the Horace Mann school. I saved my money and returned to the Delta a "Freedom Rider". John Lewis, Diane Nash and the Nashville student sit-in movement had carried the sit-in energy into Mississippi on a Greyhound bus and every black hued kid on a dusty Mississippi street could spot a "Freedom Rider" a block away. "Freedom fighters" burned a Greyhound bus carrying sitin insurgents in Anniston Alabama in the Spring of 1961 and with its measured response the sit-in insurgency created "Freedom Riders", interstate travelers into terror who landed, of all places, in the Delta at Parchman, Mississippi's State Penitentiary, just a few miles from Cleveland, Amzie's home town.

Byron De La Beckwith's murder of Medgar Evers jolted Allard Lowenstein and Robert Spike into Mississippi. They were both shocked into action. Al eventually led the first delegations of white college students into the state for the 1963 freedom vote in which COFO sponsored Aaron Henry and Ed King as Governor and Lieutenant Govenor in a Freedom campaign, thereby introducing the concept which led to Freedom Summer in 1964. Robert Spike brought the resources of the National Council of Churches into the orbit of the Mississippi movement to support Freedom Summer and direct crucial lobbying efforts in mid-west Republican congressional districts to help pass the Civil Rights bill of 1964. Beckwith may have planned Medgar's murder, but he, and all sat in complicit silence, could not have imagined how quickly events would move because of it. Neither could we, who gathered on Farish street for Medgar's funeral and watched John Doar, his back to an arsenal of Mississippi's law enforcement troops, convince Ida Mae Holland from Greenwood, and all those with her, not to walk into "sure gun-fire", into "things fall apart", "into a national disaster". We were all navigating our rafts in the rapids of history's currents and couldn't quite imagine how "things come together":

Hollis Watkins and Curtis Hayes, from Summit just North of McComb; Emma Bell from McComb; Charles McLaurin, James Jones, Jessie Harris, Jimmy Travis, Lavaughn Brown, Colia Lidell, from Jackson; Lawrence Guyot from Pascagoula; Dave Dennis from Shreveport Louisiana; Dorie and Joyce Ladner, Mattie Bivens and Fred Anderson from Hattiesburg; Anne Moody from Wilkerson county; Sam Block and James Bevel from Itta Bena; George Raymond, and Mattheo "Flukie" Suarez from New Orleans; myself; Willie Peacock from Charleston; Anelle Ponder from Georgia; Chuck McDew, James Chaney from Meridian; Diane Nash from Chicago; Freddie and George Green, Euvester Simpson, Mary Lane, June Johnson and Ida Mae Holland from Greenwood, Lafayette Surney from Ruleville, MacArthur Cotton from Koziesko; Charlie Cobb from Washington D.C.; Frank Smith from rural Georgia.

Thirty plus black high school graduates and college students came together in that pressured space-time to work twenty-four seven, to get knocked down and get back up, to steady watch the Feds turn that jail house key; invisible to the Nation at large to this day, ours was the SNCC sit-in energy translated into Amzie's world; we

carved out the larger space in which Mickey and Rita Schwerner could operate in Meridian; it was we who called forth that remarkable net-work of black Mississippi matured women: Victoria Adams from Hattiesburg, Fannie Lou Hamer from Ruleville, Annie Devine from Canton, Hazel Palmer from Jackson and Unita Blackwell from the Delta who carried the Mississippi Freedom Democratic Party (MFDP) into the 1964 Democratic Convention in Atlantic City and broke the back of 89 years of white only Mississippi Democrat Party power, clearing the way for the voting rights legislation of 1965 to enable white and black history making Mississippi voters to jointly represent their state at the 1968 National Democratic Convention in Chicago. As the New York times wrote in an editorial on August 27, 1964:

The Freedom Democrats proved that a moral argument, if powerful enough and presented with dramatic force, can cut through the cynicism and frivolity that usually prevail in a convention atmosphere ... The day of the lily-white delegations from the South is over. The Democrats from the rest of the country have finally lost patience with the exclusion of Negroes from party affairs in the South. (35) (13)

Snick was the "heart and soul" of the sit-in insurgency against Jim Crow, and these few dozen, the heart and soul of the Mississippi insurgency, came together and earned the right in 1964 to call on the whole country's common humanity to join Freedom Summer and bring Jim Crow Mississippi down.

Did the Fifteenth Amendment establish for blacks the same rights to the vote as had been established for whites? Or, was the Nation's system of federalism protected since 1875 "by non-recognition of federally guaranteed rights"? (31) (14)

We answered Judge Clayton's question to the 1963 Greenville courtroom packed with sharecroppers: "Why are you taking illiterates down to register to vote?"

We told him, in effect, that the country couldn't have its cake and eat it too. It couldn't deny a whole people access to education and literacy and then turn around and deny them access to politics because they were illiterate. Sharecropper education was the subtext of the struggle in Mississippi for the right to vote.

The voting rights act of 1965 did not include literacy restrictions and John Doar has a picture in his office of himself accompanying Attorney General Nicholas Katzenbach and Thurgood Marshall to defend the literacy provisions of the Voting Rights Act before the Supreme Court, which agreed with decisions by the Fifth Circuit:

The enforcement clause of the fifteenth Amendment gives Congress full remedial powers to prevent racial discrimination in voting. The Voting Rights Act is a legitimate response to the insidious and pervasive evil which has denied blacks the right to vote since the adoption of the fifteenth Amendment in 1870. (33) (15)

All of which set the stage for the twenty first century, and our current national divide over education and the fourteenth Amendment.

On Friday June 29, 2007, the New York Times spread pictures of all nine Supreme Court Justices on the front page to alert the Nation of the "Bitter Division" at the Court over "Brown and the 14th Amendment". In the words of Harvard law professor Laurence H. Tribe:

There is a historic clash between two dramatically different visions not only of Brown, but also the meaning of the Constitution. (38) (16)

Chief Justice Roberts, a protégé of president Ronald Reagan, 'brilliantly' argued in his decision that just because of that history the Court, if not the Nation, must be scrupulous in looking (let alone moving) into its post Jim Crow future, and recognize 'non-recognition' of Jim Crow as the principled path for the Court's decisions on public schools and the education of the Nation's children:

Tent Lott is watching the results of Mississippi's third plan for the Nation, which he set in motion at the Neshoba County Fair, Reagan's first stop on his way to the presidency in the summer of 1980, which turned out to be Roberts' first stop on his way to becoming the Supreme Court's chief justice. (41) (17)

Lott left Mississippi for Washington in '68, to serve on the congressional staff of William Colmer, a Democrat, who decided to retire in '72; Lott won his open seat and in 1980 launched Ronald Reagan's post convention presidential campaign at the Neshoba County Fair in Philadelphia Mississippi, where Mickey Schwerner, Andrew Goodman and James Chaney were lynched with the help of the Sheriff.

The visual statement on television the next day was a sea of white faces at the Neshoba Fair with Reagan's words floating above them ... he would reorder priorities and 'restore to states and local governments the power that properly belongs to them'. (45) (18)

President Reagan, who had opposed both the Civil Rights and the Voting Rights acts attracted the attention and became the personal hero of John Roberts who joined the Reagan administration in 1981 where he worked to curtail all programs intended to bring minorities into settings where they were once shut out and who, as chief justice, crafted this crafty sentence:

The way to stop discrimination on the basis of race is to stop discriminating on the basis of race. (19)

At first I thought the chief justice was mimicking a tautology: "The way to do x is to do x." Then I looked up "discrimination": Unfavorable treatment based on prejudice. Next I looked up "discriminating": Observe distinctions carefully; have good judgment. Now our chief justice is nothing if not one who observes distinctions carefully, so what is he telling the Nation to do about its educational caste system? The way to stop unfavorable treatment based on prejudice is to stop observing carefully and having good judgment on the basis of race?

Tent Lott and I are contemporaries. I was sitting in the SNCC office in Greenwood on September 30th of 1962 and Lott was a senior at Ole Miss when the pitched battle of "Redeemers" led by Governor Ross Barnett against U.S. Marshalls and President Kennedy, over the admission of James Meredith, took place. . In 1997, Senator Lott told Time magazine:

The main thing was, I felt the federal government had no business sending in troops to tell the state what to do. (44) (20)

Lucky for Lott and the entire Nation whole troops of Constitutional people worked a strategy from 1961 to 1965 that dismantled Jim Crow in Mississippi without any other 'federal troops'.

Amzie Moore, Medgar Evers and NAACP 'race men', John Lewis, Diane Nash and Freedom Riders, President John F. Kennedy and Attorney General Robert Kennedy, Judge Wisdom and the fifth Circuit Court of Appeals, Snick and the sit-in energy for the right to vote, Dave Dennis and The Congress of Racial Equality (CORE), black Masons and the Council of Federated Organizations (COFO), Larry Still from Jet Magazine, Sharecroppers and the Mississippi Freedom Democratic Party (MFDP), Dr. Beitel and Tougaloo college, Allard Lowenstein and 800 white college students from across the country, Robert Spike and the National Council of Churches, Claude Sitton from the New York Times, Burke Marshall, John Doar and the Civil Rights Division of the Department of Justice, Karl Fleming from Newsweek Magazine, Carl Holman and the United States Commission for Civil Rights, Martin Luther King and the Southern Christian Leadership Conference (SCLC), Dorothy Height and the National Council of Negro Women, Drs. Alvin Poussaint, Bob Smith and James Anderson and the Medical Committee for Human Rights, Marion Wright and the Legal Defense Fund, Bill Minor from the New Orleans Times-Picayune, Arthur Kinoy and William Kunstler and the National Lawyers Guild, Stephen Currier and the Taconic Foundation, Lloydy K. Garrison the N.Y. Field Foundation,

And here's to the following forty who fell, insurgents in the Civil Rights movement, Rev. George Lee, Lamar Smith, Emmett Louis Till, John Earl Reese, Willie Edwards Jr., Mack Charles Parker, Herbert Lee, Louis Allen, Cpl Roman Ducksworth Jr. Paul Guillard, William Lewis Moore, Medgar Evers, Addie Mae Collins, Denise McNair, Carole Robertson, Cynthia Wesley, Virgil Lamar Ware, Rev. Bruce Klunder, Henry Hezekiah Dee, Charles Eddie Moore, James Chaney, Andrew Goodman, Michael Schwerner, Lt. Col. Lemuel Penn, Jimmie Lee Jackson, Rev. James Reeb, Viola Gregg Liuzzo, Oneal Moore, Willie Wallace Brewster, Jonathan Daniels, Samuel Younge Jr., Vernon Dahmer, Ben Chester White, Clarence Triggs, Wharlest Jackson, Benjamin Brown, Samuel Hammond Jr., Delano Middleton, Henry Smith, Dr. Martin Luther King Jr. (27) (21)

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