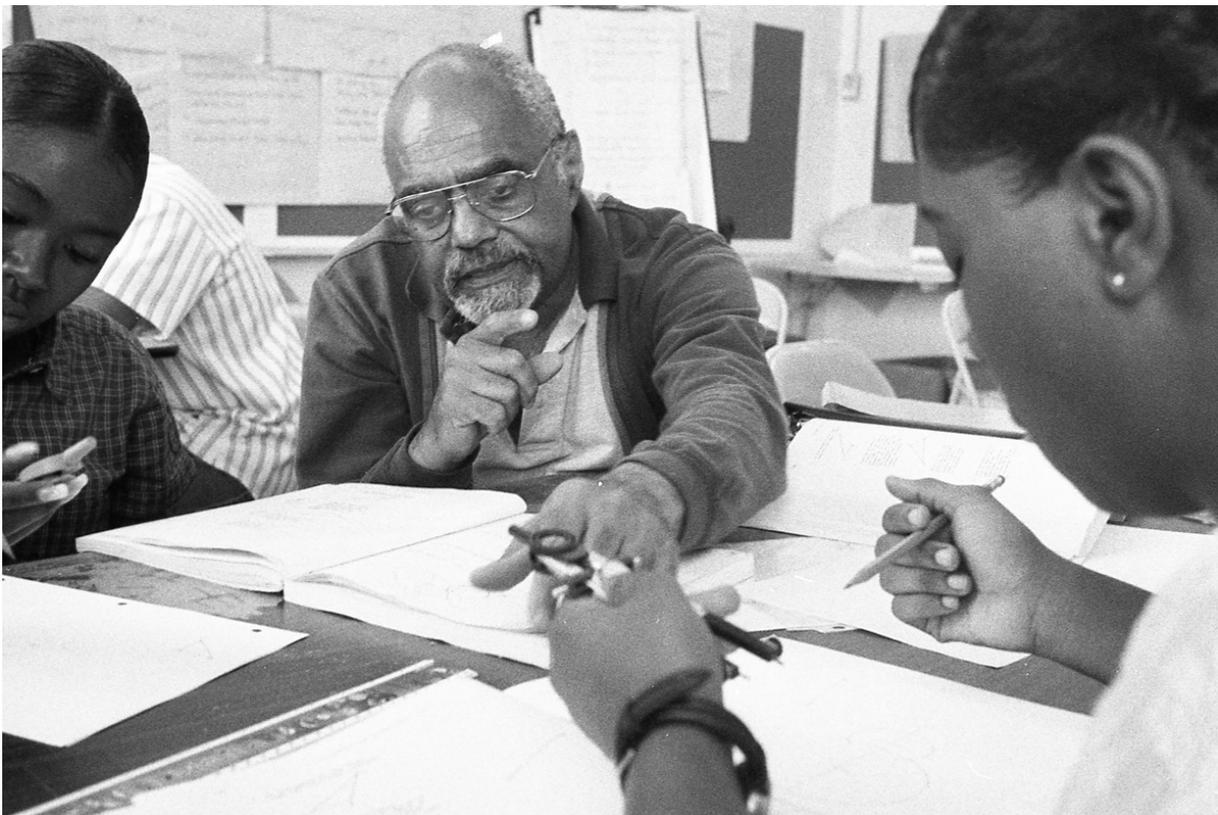


RADICAL TEACHER

A SOCIALIST, FEMINIST, AND ANTI-RACIST JOURNAL ON THE THEORY AND PRACTICE OF TEACHING

The Educational Radicalism of Bob Moses

by Jay Gillen



BOB MOSES WORKING WITH STUDENTS. PHOTO BY DAVID RAE MORRIS

The Algebra Project was founded in 1982 by former Student Nonviolent Coordinating Committee (SNCC) field secretary Bob Moses as a grassroots organizing effort around the problem of math education. Since then, thousands of teachers have learned about the Algebra Project's unique adaptation of constructivist pedagogy, tens of thousands of young people have participated in Algebra Project classrooms or after-school activities, and many more thousands of parents, organizers, activists, professors, and school officials have become acquainted with at least some aspect of the Algebra Project's work.

Often, however, those who come in contact with the Algebra Project, or even those who become involved in its organizing, tend to underestimate the radicalism of Dr. Moses's strategy. As a SNCC field secretary in Mississippi in the 1960s, Bob Moses earned the respect and admiration of, for example, Stokely Carmichael (later Kwame Ture) as he guided Carmichael through Mississippi's violent White supremacy. Proponent of Black Power as a political agenda, Carmichael is rightly remembered as a revolutionary. Dr. Moses was and is no less revolutionary. He had, however, a different strategy towards an equally revolutionary end.

This essay locates Dr. Moses's radicalism in his vision of young people as potential insurgents in the battle to destroy the American caste system and attempts to explain how the Algebra Project sees math classrooms as uniquely suited to the building of an earned educational insurgency for the 21st century.

Political Function of Math Education

There are many more champions of student "voice" today than there were even ten or twenty years ago, but the problem faced by young people in poverty is not simply about "voice." It is a problem of power, and the radical strategy of the Algebra Project is that the purportedly ineducable young people of the unworkable schools can learn not only to speak out, but actually to wield power.

The radicalism of the Algebra Project is often watered down by confusion about the choice of math classrooms as sites of insurgent political action. Why choose one of the most hated and disempowering locations in already hated and disempowering schools? Algebra Project pedagogy emphasizes student control of classroom discussions, student-initiated content, the role of teachers as questioners and students as mathematical authorities in their own right. But even parents, teachers, professors, and administrators who are open to these methods think that the reason to promote this kind of classroom democracy is that such classrooms make it easier to learn math. Dr. Moses's purpose, I believe, went in exactly the other direction. He taught that a well-structured mathematics classroom makes it easier for young people to learn democracy, and so prepares them to step out of classrooms altogether into the not-yet-written future of a youth-led educational and political insurgency.

Math for the Algebra Project is an organizing tool.

To make myself very, very clear, even the development of some sterling new curriculum—a real breakthrough—

would not make us happy if it did not deeply and seriously empower the target population to demand access to literacy for everyone. That is what is driving the project. What is radical about the Algebra Project is the students we are trying to reach and the people we work with to drive a broad math literacy effort—the Black and poor students and the communities in which they live, the usually excluded...Young people finding their voice instead of being spoken for is a crucial part of the process. Then and now those designated as serfs are expected to remain paralyzed, unable to take an action and unable to voice a demand—their lives dependent on the goodwill and good works of others. We believe the kind of systemic change necessary to prepare our young people for the demands of the twenty-first century requires young people to take the lead in changing it. (Cobb and Moses 19)

It is a truism of 21st century leftist activism that "everything is political," and the interpretation of this truism in math classrooms today usually envisions lessons like studying the distribution of police traffic stops in terms of the demographics of drivers or neighborhoods. But Dr. Moses had something different in mind when he decided to focus on algebra in the 8th grade. He wants us to understand the *politics* of questions that almost everyone thinks are not political at all. Who is taller, Matteo or Charnell, and by how much? Which fraction is larger, $\frac{3}{7}$ or $\frac{1}{3}$? What does x represent in the equation $3x + 7 = -2x - 8$ and how do you know? How can you prove that the three angles of a triangle equal 180° , do they always, and what counts as a proof?

These straightforward mathematical questions might be on worksheets in elementary, middle, or high school, and most teachers would mark any answer to them either right or wrong, with a check or an x. But Dr. Moses insists that the teacher's check or x masks important political issues that need to be brought to the surface for young people to debate and grapple with. One important question, for example, is "Who has the authority to decide the validity of an answer to a mathematical question?" The correct answer for people who believe in freedom is, "We do." It is up to a community of mathematicians, who may well be an 8th grade class of poor and oppressed students, to come to a consensus on how they want to pose and answer questions in their math classroom.

In the Algebra Project, math classrooms and youth-run after-school math spaces are where young people can learn (1) why it is important to hammer out agreements on the language we use to represent our ideas and values, and (2) how to hammer out agreements. Dr. Moses challenges us to try to understand the parallels between political freedom struggles and math freedom struggles.

There is a school of thought, almost entirely unquestioned outside of rarified philosophical circles, that mathematical truths are *not* subject to debate. The set of mathematical truths presented in the world's math classrooms are thought to have been "discovered" or "invented" by people a long time ago, mostly by very smart men, and passed down in authoritative writings. Teachers who "know their subject" affirm these truths and instill them in their students.

Dr. Moses takes a different position in line with a much less widely appreciated but in philosophical circles equally respectable line of thought. This alternative line of thought sees mathematical language as requiring agreement among a community about the meaning of terms and the structures of syntax they are using. That agreement about language grows out of the shared experiences of the community. They see objects, actions, and relationships in the world and agree to describe them in certain ways. That agreement becomes formalized in a set of definitions and operations, but in all cases the language of the community grows out of shared experiences and can be “tested” in the sense that anyone willing to pay attention can come to agree that the language fits their experience in some way.

In the Algebra Project we teach $3x + 7 = -2x - 8$ by first inviting students to participate in certain kinds of races and other physical experiences (before ever sharing the algebraic notation). We then talk about what they have experienced in the community’s own language. Next, we invite them to “regiment” or “straight-jacket” their language using particular syntactic modifications used since the 17th century by mathematicians in public forums.

We treat young people with full respect as mathematical *citizens*. They have as much intellectual autonomy as the teacher or as the professional mathematicians who designed their curriculum or textbooks. They have as much right as anyone to demand that mathematical sentences and procedures make sense, and they can learn to take the meaning of mathematical sentences seriously by *taking each other seriously as mathematicians*. For example, most classrooms accept an “answer” like $x = -3$ for the “problem” $3x + 7 = -2x - 8$. We are more interested in students discussing with each other whether the equivalence of “ x ” and “ -3 ” makes sense in the context of the sentence “ $3x + 7 = -2x - 8$.” And it is important to understand that *they do not need a teacher to be present* either to have that conversation or to be certain that “ $x = -3$ ” may make sense in that context.

Sometimes the question arises: What if the students come up with something mathematically “wrong”? In fact, this is a question that professional mathematicians themselves have to deal with in their most advanced work, and it is a question that is answered through an understanding of public space. If a group of students—two or three, say—come up with some mathematical assertion or other that they hold to be true, a larger group of students—five, ten, twenty, or thirty—may notice some flaw in their argument and persuade them that their assertion doesn’t hold water. It is entirely possible that a group of students heads off on a wrong track and ignores some valuable mathematical insight—until they encounter a particular mathematical citizen, or until their public space is enlarged sufficiently that the error in their thinking is pointed out to them. But this is a part of the human process of doing mathematics: there are literally thousands of historical examples. “Zero,” negative numbers, the square root of 2, or the square root of -1 were all outlandish ideas at one time. Mathematicians who believed they were experts in their field had to be persuaded that they had missed something. No one compelled them—only the weight of reasoned arguments in mathematical communities.

Teachers can play an important role as a part of the public space that helps create correctives for students when they need correctives, but this is much less often than imagined. And it is not the teacher’s authority that provides the corrective; the teacher simply represents a certain enlargement of the public space so that students encounter more or different opportunities to defend their thinking.

There are many philosophical and mathematical questions about how quantitative discourse works in public forums. Here we are interested in the political questions. Any group of people can designate themselves as a “we” for mathematical or any other purposes. They can offer whatever arguments or evidence they want to try to establish the validity or usefulness of their terms and procedures. They can integrate and involve themselves with other groups, provided those other groups accept their involvement. But in all cases, their constituting themselves as a “community of mathematicians” is an important *political* act, especially in the 21st century.

Dr. Moses’s conviction is that there is an opening for radical organizing around math literacy today that closely parallels the opening around voting rights in the 1960s. The strategy in both cases is to exploit a consensus that is both superficial and profound. In the 1960s the consensus was around the right to vote. No one, not even the racists, denied the importance of voting. Their commitment to voting was superficial, only lip service, in relation to the sharecropping caste, but even their superficial pronouncements opened a crack towards a profound, radical opportunity because the vote held so much meaning—historically, politically, emotionally—for the excluded. As Dr. Moses said scores of times, “It wasn’t radical to register people to vote. What was radical was registering sharecroppers to vote.” Registering sharecroppers, or more precisely, sharecroppers registering themselves, changed the political calculus of the South and in fact of the whole country. The radicalness of this issue is, of course, still with us today as racists try to roll back the franchise for those who are supposed to simply accept their lower caste status.

In the 21st century, virtually everyone agrees that education without math and science is second-class education. At least, people agree to this superficially, with lip service. Just as few Black and poor people today receive first-class math education as were registered to vote in Mississippi in the 1950s, but there was no *explicit* ban on Black people voting then, and there is no explicit ban on Black people learning advanced math today. The superficial consensus, however, opens a door to a radical political opportunity. Dr. Moses says that the Algebra Project works the demand side of a political problem. The strategy is for young people who are poor and oppressed to “demand what everyone says they don’t want” (Cobb and Moses 18).

In the 60s the racists said sharecroppers and domestic workers were apathetic about politics and happy to leave “that mess” to Whites. SNCC learned to organize the disenfranchised to line up at courthouses and to vote by thousands in the parallel election for the Mississippi Freedom Democratic Party and so prove that not apathy, but access was the problem. Today, millions of people believe that Black and Latinx, poor White, and other oppressed young

people “don’t want to learn,” are apathetic about school, drop out, don’t care, and that their families are apathetic, too. Working the demand side for the Algebra Project means learning to organize young people and their families to demand access to first-rate math education.

The consensus on the importance of math education is superficial in the sense that few people envision a massive reordering of society as a consequence of successful education. In fact, few people believe mass excellence in mathematics is possible in any short-term future. Even among people who claim to truly believe that no one should be left behind in STEM, the picture most of us hold is that the economic and political structure of America today would stay more or less as it is, but some greater number of Black and Brown children would live in larger homes, graduate from college at a higher rate, and hold more elevated management positions in government and industry. This is *not* a radical vision. It is a vision of better access to a burning house.

The superficial consensus on the importance of math education, however, is potentially an opening to something much deeper. Dr. Moses insisted that math education is an organizing tool, and the purpose of the organizing tool is to try to devise the means for destroying the caste system in America. In this vision, it is young people who must provide momentum for radical change, just as it was young people who provided momentum in Mississippi in the 1960s. They must dig in, establish their own authority in math teaching and learning, create structures for educating their peers, model democratic forms of self-governance, make plans and carry them out, invent new structures of education that do not create a pyramid of opportunity where the masses are crushed beneath the vanishing few at the top.

And where will young people in the 21st century learn to organize themselves, learn to devise the means to seriously challenge the caste system over a generation or two? In math classrooms, where every young person is forced to be. That is where they can learn to build consensus among themselves, learn to make demands on each other to dig in against an oppressive enemy, learn to enjoy themselves without abandoning their collective life and death purpose.

Who Is Qualified to change the System?

The political origins of these ideas are in the teachings of Ella Baker, a prolific organizer for Black freedom and the guide and fundi of the Student Nonviolent Coordinating Committee in the 1960s. Her words form the epigraph to Dr. Moses’s book, *Radical Equations: Civil Rights from Mississippi to the Algebra Project*:

In order for us as poor and oppressed people to become a part of a society that is meaningful, this system under which we now exist has to be radically changed. That means we are going to have to learn to think in radical terms. I use the term *radical* in its original meaning—getting down to and understanding the root cause. It means facing a system that does not lend itself to your needs and devising the means by which you change that system. That is easier said than done. But one of the

things that has to be faced is, in the process of wanting to change the system how much have we got to do to find out who we are, where we have come from and where we are going...I am saying as you must say, too, that in order to see where we are going, we not only have to *remember* where we have been, but we must *understand* where we have been. (Cobb and Moses 3)

What does this mean? What is Baker’s challenge to us? And why did Bob Moses feel that it was important to prioritize?

First, what is the difference between “remembering” and “understanding” where we have been? It must be an important difference. Miss Baker and Dr. Moses did not use words loosely. One key to the difference between remembering and understanding, I believe, is repetition. I did not have the opportunity to learn directly from Miss Baker, but I know that Dr. Moses’s teaching and learning habits relied on and covered the same material many times over. If a book caught his interest and he wanted to really understand it, he would read it again and again. He used to tell the same stories dozens of times, often to the very same people, because he wanted them not only to remember the stories, but to understand them.

One of these stories, for example, is about Judge Claude Feemster Clayton in Greenville, Mississippi:

The link between voting and education had been made explicit with the question Judge Clayton put to me on the witness stand of the Greenville Federal District Court in the spring of 1963. Months before, our SNCC car had been “grease gunned” on highway 82 and SNCC converged on Greenwood, raised food in Chicago, and rallied hundreds of sharecroppers to confront the registrar at the Courthouse. When SNCC Field Secretaries were arrested, Burke Marshall [of the U.S. Department of Justice] filed suit against the city, had our cases removed to the Federal Court and sent John Doar to be our lawyer. Judge Clayton had one question: “Why is SNCC taking illiterates down to register to vote?” My answer was: “You can’t have your cake and eat it, too. You can’t deny people an educational opportunity through your political arrangements, and then say the reason people can’t vote is because they can’t read.” (Cobb and Moses 69; Moses 2019)

Dr. Moses told this story again and again because it is not enough to remember that the political arrangements of White supremacy denied educational opportunity to sharecroppers and to the enslaved before them. You must try to understand the circular nature of the racist argument. You must look from many different angles at the deceptive appearances of illiteracy—how illiteracy itself is subject to misreading.

Judge Clayton read illiterate sharecroppers as unqualified to participate in the country’s political arrangements. But Dr. Moses asserts that illiteracy cannot be read as the essence of the people SNCC is bringing to register. Illiteracy tells us something about the system of

White supremacy but says little or nothing about the sharecroppers themselves.

Today, the educational subtext of political and economic power remains difficult to read. As Jerome Givens points out, Black educability is still suspect (Givens 10). Not necessarily in official declarations and not necessarily in the abstract, but in each individual case of sorting, educational neglect, and punishment, millions of Black and other throw-away children are judged as intellectually and morally incapable or unworthy.

There are many ways to see this if we are looking, but the clearest may be the hurdles to admission to “selective” high schools or colleges. Black children and young adults submit applications to these institutions as do children of other races and ethnicities. But the applications from Black children are set aside in far greater proportions. We do not say generally, as an official principle, that Black children are innately inferior or ineducable. We just say for *each individual, one at a time* that they haven’t achieved some minimum standard that the school or program is looking for, that they “have not lived up to their potential,” that they are “unlikely to be successful” in this challenging environment, and we prove our racial equanimity by admitting a few Black students, demonstrating that the race of the applicant is no barrier.

How is this process different from Judge Clayton’s question: “Why is SNCC taking illiterates to register to vote?” The judge was correct that many of the sharecroppers did not know how to read, just as it may be true today that many Black students who apply for the most challenging schools are unlikely to pass their courses in those schools. But Dr. Moses’s response to Judge Clayton remains unanswerable: You can’t have your cake and eat it, too. The illiteracy, including the mathematical illiteracy, of our children says nothing about our children; it only gives evidence of the injustice designed into the country’s system of education and into our collective values. The country continues its circular reasoning that uneducated Black children are properly assigned to lower caste status precisely because the country doesn’t adequately educate lower caste children.

A reader may agree with the tenor of the exposition so far but may still be a long way from understanding Miss Baker’s challenge to devise the means by which we change the system. It is sometimes easy to know what is right, but much harder to do what is right, or to understand why doing right is so important. Remember Baker’s words, cited above: “...this system under which we now exist has to be radically changed. That means we are going to have to learn to think in radical terms. I use the term *radical* in its original sense—getting down to and understanding the root cause.” What is the “root cause”? White supremacy? Capitalism? Imperialism? What does Miss Baker mean? Certainly, these things poison human relations and are causes of poverty and oppression, but are they the “root cause”? Miss Baker says the system has to be radically changed and then she says that this necessity implies that we need to learn to think differently—“we who are poor and oppressed.” Not that the oppressor must think differently, but that we must.

She goes on: “It means facing a system that does not lend itself to your needs and devising the means by which you change that system.” Judge Clayton, what he stands for, what he represents, what he believes, even the racist systems and structures of which he is a symbol, are not the root cause. Another judge sitting in Judge Clayton’s chair, even a progressive judge, even the abolition of the police and courts would not solve our problem because our problem goes much deeper.

“The key word here is *you*,” Dr. Moses explains in *Radical Equations*. “Devising the means by which *you* change the system.” “Our efforts with our target population is what defines the radical nature of the Algebra Project, not program specifics” (p. 19). He is talking about the young people themselves, about a root cause deep inside each of them that quiets them, that urges them to settle, that distracts them from their own thoughts and feelings or that raises a barrier between their thoughts and feelings and the public sphere that is shared by all the people in the land.

The question that Ella Baker asked young people to confront in 1960 as they were deciding to form SNCC, and that Bob Moses asks young people to confront today in the Algebra Project, is this: How are you going to organize yourselves as young people to devise the means to change your society? What demands will you make on yourselves as individuals and *how will you make demands on each other as peers* so that you will earn the attention and respect of the elders in your community and of at least some portion of the dominant society, enough respect that the disruptions you plan to the system can dig in and gain some traction for the long haul?

This question of how young people under oppression will learn to organize themselves and to make demands on each other horizontally and democratically is a question that gets to the root of the problem. Are young people who are poor and oppressed qualified to enact this kind of self-organization and self-determination or are they not? What do you think?

Bob Moses believed that they are, and he believed that it was in math classrooms with highly trained, radical teachers and in out-of-school math programs run by young people themselves that a youth-led insurgency could develop. Just as sharecroppers and domestic workers in Mississippi interrupted the political arrangements of the South so that those arrangements could no longer function, so Dr. Moses believes that young people can learn to initiate and sustain a disruption to the educational arrangements of the country so that the structure of caste education will have to change. But they will need to earn their insurgency, and they will need to earn their insurgency by organizing themselves to do math.

How This Works in Practice: The Three Tiers of Demand

The Algebra Project asks young people to consider three “tiers” of demand: demands on oneself, demands on one’s peers, and—*subsequent* to those first two tiers—demands on the larger society.

The first tier of demand is a demand on oneself. I need to learn to think differently and to do differently. I cannot pass this obligation off to anyone else; it is for me in my human uniqueness to decide and to act. I must go to class or go to the meeting, or do my research, or complete my work, or ask the necessary questions, or gather the necessary tools, or listen instead of talk, or check my assumptions, or face my fears. Much more could be said about this first tier of demand from the philosophical, moral, and political perspectives that informed Dr. Moses's work, for example, through his study of Albert Camus. But this essay centers on the second tier.

The second tier of demand is a demand on one's peers. "We" must learn to think differently, and we must learn how to constitute a "we." Another of Dr. Moses's repetitive questions: "Who is the we?" And the answer is another question: "Can you build a consensus about the nature of the problem you want to take on, and at least an initial consensus about how you are going to go about tackling it?" Whoever can build and join that consensus becomes a "we," a group of peers. Those peers—each one already making first tier demands on themselves—must then be willing to make second tier demands on each other: Let's all study the next chapter of the book before class; then we'll have a better discussion. How will we divide up the tasks for this project, and how will we hold ourselves accountable as a collective? We said we would all be at the meeting Tuesday; why weren't you there?

A properly functioning Algebra Project math classroom is not only "student centered"; it has evolved into a student-determined culture. This is equivalent to saying that the structure of demand in the classroom is not teacher-to-student, but peer-to-peer. In a student-centered classroom, a caring, thoughtful teacher may institute a set of systematic practices that respect students as the principal agents of their own education. A youth-determined culture goes even further: the systematic practices are created or at least accepted over time by the young people themselves as practices that are worth passing along to peers and near-peers. Teachers have crucial roles in offering insights, ideas, knowledge, and especially invitations to try new things or to think about things in a new way. But it is the young people, not the teacher, who are ultimately the "power in the room" as Omo Moses puts it (2008).

Another way to think about this additional step towards youth-determined culture is that the scope and sequence of a school's math curriculum might not necessarily determine the scope and sequence of the students' mathematical (or other) work. This is, of course, impractical in almost every contemporary public school. And in fact, there are very few Algebra Project classrooms that function in this maximal way. But spin-offs of the Algebra Project, specifically the Young People's Project and the Baltimore Algebra Project, which operate largely outside of school time, have been successful—at least in spurts—in creating youth-determined cultures around math education.

Both the Young People's Project and the Baltimore Algebra Project pay young people to teach math to their peers. The Young People's Project originated through Bob Moses's sons, Omo and Taba, who were working in

Mississippi in the 1990s to try to support the Algebra Project's classroom curriculum with after-school math programming. YPP is now directed by Dr. Moses's daughter Maisha and promotes a "cascading" approach to near-peer math teaching. Paid college students (College Math Literacy Workers) teach number theory games, coding, and other math content to paid high school students (Math Literacy Workers) who then teach middle and elementary school students through highly interactive activities. YPP is a multi-million dollar enterprise, legally independent of any academic or governmental institution, receiving funding through school districts, the National Science Foundation, and private philanthropy to advance a vision of youth-determined math education.

The Baltimore Algebra Project evolved somewhat differently, but it also has paid millions of dollars in wages to young people in Baltimore for teaching math and self-advocacy skills in youth-determined spaces. Originating as an after-school tutoring program founded by high school students who had learned Algebra Project pedagogy from their middle school teacher, BAP evolved into a cooperative economic enterprise governed by a youth collective. It has managed to pass the governance reins along to succeeding generations of Baltimore young people over more than two decades. BAP also evolved a prominent "advocacy" wing that periodically galvanizes political demands around youth priorities in Baltimore, including campaigns for year-round youth employment in knowledge work, preventing the construction of a new youth jail, and fighting for equitable school funding.

The relative independence of YPP and BAP from typical educational command structures (district hierarchies and state and federal policy mandates) has allowed them to develop cultures that are not only centered on young people, but that young people are able to structure according to their own needs. I am most familiar with BAP's development of this vector and will focus on it as an illustration of Dr. Moses's broad strategy.

BAP activities often have no adults present at all. Schools are usually hypocritical about the power and autonomy of young people. For example: it is unthinkable in most public settings that a high school class would have no adult teacher. Young people are conceived as generally incapable of structuring their own education. At the same time, schools expect most students, and especially adolescents, to do enormous amounts of learning on their own. The teachers' responsibility is to lay out certain conditions and to "present information," but it is the students' responsibility to actually learn what is required. How else could schools rank and grade young people for their success or failure in "meeting standards"? Implicitly, schools acknowledge that both adults and young people are somehow "responsible" for education. But the relative accountability of teachers and students as causes of learning is a topic that is absent from virtually all policy discussions. The two major ingredients—students' contribution to their learning, and adults' contribution to the students' learning—are part of entirely separate accountability systems. The *relative* accountability of teachers and students isn't discussed because the autonomy of young people is generally taboo as a policy matter. Policy makers simply

cannot afford to treat adolescents as fully autonomous actors, clearly a hypocritical posture. Teachers, principals, parents, social workers, police, and everyone else who work directly with children know that adolescents have will, autonomy, and power to do what they want in any given circumstance, policies be damned. That is why we adults feel part of our responsibility is to try to “hold young people accountable” for their actions. But for complex historical reasons, the current official stance of almost all policy setting institutions is that adults are ultimately responsible for the “success” or “failure” of young people under the age of 18.

The Baltimore Algebra Project tries to avoid this hypocrisy. It recognizes adolescents as autonomous. They have a kind of “negative” autonomy in the sense that they can simply *not do* what adults ask them to do. And they have a “positive” autonomy in the sense that they often do formulate plans, individually and collectively, with the purpose of meeting goals that are not set by adults, but that are set by young people themselves. Those goals are often “non-academic,” but not necessarily. Recently a group of nine young people in BAP decided to coach a team of elementary schoolers in Flagway (one of YPP’s number theory games) so that they could participate in the Flagway national tournament in Miami. The BAP youth worked with an elementary school to recruit students, talked with parents and school officials about the trip to Miami, picked up the students after school to walk to the BAP after-school site, structured coaching sessions for two months so that the elementary schoolers could learn the game, and then coached their younger near-peers to a third-place finish at the tournament. Parents asked to meet the adults who would be chaperoning the trip; adult staff of BAP (several who were themselves alumni of the organization) were often on hand and accompanied the young people on their trip. But young people independently facilitated all work sessions and decided themselves how to proceed at each step.

The self-determined work of young people’s collectives shares all the same challenges and opportunities that adult collectives have. In the Flagway trip preparation, for example, some BAP members showed up more, followed through more, and generally worked harder than others. This led to internal discussions about commitment and how to organize the work, but it did not lead to adult intervention. Peers made demands on each other; adults were not making demands on young people.

These demands on one’s peers are what Dr. Moses saw as the crucial, first *political* demands. In a democracy, politics is peer-to-peer. Equals make arrangements to achieve mutual or collective interests, and a necessary aspect of those arrangements is the acceptance of a peer’s insistence that you perform as agreed. Demand on peers is the distinguishing accountability mechanism of what we now call democracy: the “higher” authorities of democracies are only representatives of common citizens, acting on some kind of consensus. The judge, the President, the “government,” are our peers in theory. Dr. Moses asked us again and again to consider how “We the People” in the preamble to the Constitution is a collective noun referring to specific people in concrete historical circumstances, constantly renewing a commitment to operate *as peers* with

common purpose. Practice, of course, is very different in America’s caste society, but all over the world, including in the United States, small organizations centered on particular, community-based needs regularly institute democracy through structures entirely between peers. This was the structure of SNCC and of the Mississippi Freedom Democratic Party. It was and is a realistic, but demanding, ideal.

The examples of BAP or YPP and of successfully implemented Algebra Project classrooms raise the possibility that the internal politics of schools could be different. Currently, the politics of schools is authoritarian in keeping with the “business” culture of the country. Superintendents command principals, who command teachers, who command students. Some “school leaders” or progressive teachers lean in varying degrees towards more communal practices: inviting buy-in and input, delegating authority, and fostering collaboration. But almost everywhere, those higher up in the hierarchy make demands on those lower down. This could be different. Accountability could be horizontal, the way it is in democracies. This could even be the case for adolescents (and is often the case in BAP and YPP) and possibly for even younger children.

The significance of the first two tiers—demands on self and demands on peers—is that they are the necessary preconditions for successful third tier demands on the larger society, on the country. The lesson Bob Moses took from what he called the Mississippi Theater of the Civil Rights Movement was that “democracies require earned insurgencies.” The “earning” is done in the first two tiers of demand. By demonstrating that they could face their own fear, that they could pick themselves up from tragedy and defeat, that they could link arms and keep singing and coordinate their creative protest on some significant scale, the young people from SNCC earned enough backing to turn the tide of public opinion.

It is relatively easy to see the structure of these three tiers of demand in hindsight when we look at the Civil Rights Movement. We understand the heroism of John Lewis, Fannie Lou Hamer, Jim Forman, Ruby Sales, and so many others as evidence of demands they made on themselves and their peers, gaining respect from at least some elements of the larger society until even the most unbending elements of the power structure were compelled to compromise. But in an irony of history, it is much harder to see how the same structures can operate today, partly because of the earlier successes. We tend to get stuck on tier one and then skip to tier three, without clearly understanding the structure of the series.

Tier one, demand on self, is read today in the context of America’s mythic individualism. “You can be anything you want to be.” Every school child hears again and again that their individual effort determines their “success.” Republicans and many libertarians stop at this point in their political analysis: everyone gets what they deserve through their own individual effort. But those of us with more left-leaning ideologies jump from here to the third tier—demand on the larger society. We argue that the structures of our society are oppressive, racist, caste-based, unjust, and immoral. So we make demands on individuals or on

institutions in the larger society to try to bring about change. I believe we are right to make these demands.

The challenge that Ella Baker and Bob Moses pose to us, however, is not only about the demands we make on ourselves as individuals, or the demands we make to the larger society. Ms. Baker and Dr. Moses ask us to think about the demands we must make on our peers. And oddly—because after all we live in a democracy—this is an unfamiliar kind of demand and one we are very rarely *taught* how to make. Most of us have never experienced or learned the process of making democratic demands on peers. The point of the Algebra Project turns out to be that math classrooms are especially well-suited to teaching and learning this core democratic skill.

What young people can learn in math classrooms that is difficult to learn anywhere else is how to make demands on each other as “reasoning subjects” (Givens 10). Of course, students can learn to use evidence and argument in the course of studying history or literature, too. But the community of mathematicians and scientists demands a level of consensus that goes beyond other subject areas. Mathematicians and scientists do disagree about certain topics passionately, and don’t share a consensus on everything. But there is a basic, and we would say democratic, agreement among mathematicians and scientists that the typical arguments in their fields persuade literally everyone who is willing to pay attention. Nobody needs to take anybody’s word for it; no one needs to accept any arbitrary authority in a well-designed math classroom. Each individual is able to verify the truth of the evidence and argument for themselves. But the actual test, and constant re-testing, of mathematical truths comes from the process of building consensus again and again among groups of people who agree to do this peculiar kind of work—to both verify each one for themselves *and* to find words, symbols, forms of communication, and arguments that build a “we” in consensus.

Of course, this rejection of arbitrary authority is very different from most people’s experience of math classrooms where mathematical truths are simply asserted by textbooks and teachers claiming to be authoritative, and where institutional power is entirely in the teacher’s hands. Most secondary math textbooks embed an interesting critique of this teacherly authority in their very structure: because they are written by mathematicians, textbooks paradoxically include at least informal proofs of many theorems, the mathematicians believing with all their hearts that the practice of mathematics involves “reasoning subjects,” not people who accept dogma from arbitrary authorities. Students mostly ignore the proofs, because they are almost never included in anyone’s grade; the real game of the caste-reinforcing “system” is the imposition of arbitrary authority, not the democratic practice of actual mathematicians.

Nevertheless, the mathematicians’ practice is exactly the process needed for a successful democracy; we require both the assertion from each individual that they are equally qualified to contribute to the general welfare and also a willingness to be questioned and challenged by peers, who need not and should not accept any individual’s authority

over them. In the English classroom you can go your separate ways arguing over an interpretation of a poem or whether there is space in the canon for both Shakespeare and Toni Morrison. And in a free country you can go your own separate way about what kind of music you listen to or what god you worship. But math classrooms require everyone in the end to be on the same page in some way: we should all be able to agree that the three angles of a triangle do *not* always add up to 180°, for example, on a sphere—it isn’t a matter of “opinion” in a community of mathematicians.

This is a key lesson of the 1960s voting rights movement, as Dr. Moses insisted many times. Each article of the Constitution and each statutory law, just like a mathematical theorem, is language agreed on by a community of practitioners to accomplish a particular purpose. Participants in a democracy—both government officials and ordinary citizens—can be confronted about the meaning of the laws or changes needed in the laws. And somehow, even without a thorough theoretical understanding of the issues, most participants in a democracy agree that some common attitude towards these pieces of language, the corpus of law, must be shared and respected *by everyone* for the democratic practice to continue. It is this common understanding that causes all sides in our current political crisis to hold up the Constitution as their banner; although relatively few Americans have a clear idea of what is *in* the Constitution, the great majority believe that its words—whatever they might be—hold some kind of truth of great importance to freedom, justice, and security.

Dr. Moses learned in the 1960s that this vague but deeply rooted belief in the power of the Constitution’s words opened a door to a certain kind of organizing. The oppressed could be organized to demand that words be taken seriously, and the oppressors could decide, once they felt enough danger, to conform their behavior a little less hypocritically to the words they claimed were true. This organizing strategy led directly to the Voting Rights Act of 1965, which was a belated attempt to bring the country’s practices in line with the country’s principles. The point here is that this strategy hinged on the tacit acknowledgement—forced by the Civil Rights Movement insurgency—that we could not simply agree to go our separate ways. We had to agree on *something*, and that something turned out to be that every adult has the right to vote, illiterate or not.

The Algebra Project is a strategy for forcing a confrontation parallel to the voting rights struggle, but focused on the much deeper hypocrisy of our education system. Starting from math classrooms and out-of-school community math sites, young people can begin to develop shared language, shared demands, shared ways of moving together until some of them devise ways to step into the public arena and demand a change from the system that passes wealth, power, and opportunity from one generation to the next on increasingly rigid caste lines. You may not agree that math classrooms will work as venues for this organizing of oppressed young people’s self-determination. And maybe you are right. But you are certainly mistaken if you believe that Bob Moses’s goal was anything less than the uprooting of caste in America. His vision, a long-term

vision to be sure, is of the most radical change possible: from a society built on greed, violence, and exploitation to a society in which no one at all is either oppressor or victim.

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