

LIBERATING LEARNING

Technology, Politics, and the Future of American Education



Terry M. Moe
& John E. Chubb



Center of the American Experiment is a nonpartisan, tax-exempt, public policy and educational institution that brings conservative and free market ideas to bear on the hardest problems facing Minnesota and the nation.

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Preface

Simply put, almost regardless of whatever legions of good and energetic people have attempted over the last generation to significantly improve elementary and secondary education in the United States, and despite spending which has exploded, the system has remained largely locked in place. Witness, for example, academic skills which haven't improved very much if at all, graduation rates which have barely budged, and achievement gaps which remain enormous.

At the risk of making technological marvels sound like magic potions, a very good case can be made—or more precisely, Terry Moe and John Chubb have made it in their very good book—that the most potent force for fundamentally changing such patterns of mediocrity and worse is higher and higher technology, as it can accomplish what politics and bureaucracies are encoded to block.

Liberating Learning is optimistic in the way one would hope a book by two distinguished political scientists would in fact be: hardheadedly, as in judiciously.

Both Drs. Chubb and Moe did their graduate work at the University of Minnesota. Not content to have that common point of reference on their vitae, they also have both served on the Stanford faculty, John

in the past and Terry still. They are both members of the Koret Task Force on K-12 Education at the Hoover Institution with other superb scholars such as Chester E. Finn, Jr. and Diane Ravitch, and my two favorite education economists (everybody should have at least one) Eric Hanushek and Caroline Hoxby. And, of course, they are the coauthors of one of the most important education books of the 1990s, *Politics, Markets & America's Schools*.

I should add that Dr. Chubb—who spoke at one of American Experiment's very first programs in 1990—is also a founder and currently chief development officer of Edison Learning, which as far as I know, is not one of the institutions or places where Dr. Moe has been employed.

Mitch Pearlstein
Founder & President

American Experiment Luncheon Forum
The Depot Minneapolis
July 22, 2009

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John Chubb: There's a lot of talk these days, as there should be, about what we need to do to educate American kids to levels of excellence, especially in terms of technological sophistication,



that will allow them to compete in the 21st century international economy.

What is seldom said is that while we try to educate kids for the 21st century, we educate them in schools that look very much like the 20th century or even the 19th century. What I mean by that is the basic mode of education for most kids is to be in a classroom with 25 classmates, with a teacher at the front of the room, and with textbooks on their desks. They march through a standardized curriculum in which everybody in the group is supposedly moving at the same pace. Even though there are all kinds of technologies that are available to support that process, the basic mode of instruction today is very much the same as it was 50 or 100 years ago, or even longer.

Now, this would be okay if it were working. Yet the fact of the matter is—I won't bore you with a lot of statistics—that our children are not measuring up. If you look at the federal statistics, only about a third of our kids are truly proficient in basic subjects like reading and mathematics. Thirty percent of our kids earn bachelor's degrees. Seventy percent are finding their way in the world without a college degree. That ranks us 15th in the world in the percentage of kids earning bachelor's degrees. We used to be in first. The achievement gaps between black and white and between Hispanic and white students are just overwhelming. Two-thirds of children of color have below-basic skills. Only about seven or eight percent of them will earn a bachelor's degree. Countries around the world are *way, way* ahead of us in achievement. In recent studies of math and science, our 15-year-olds ranked 21st and 25th in mathematics and science, respectively. We're not doing nearly as well as we should be.

The country has tried very hard to do something about this. We do have competition today among schools and choice for parents, and that's a good thing. It shakes up the system. It keeps people on their toes. We have accountability sponsored both by the federal government and the states. We test kids. We hold schools accountable in ways that we didn't in the past. We've taken important steps over

the last 20 years. Despite these things, we are not where we need to be as a country. We're moving ahead very, very slowly and not as rapidly as the countries with which we're trying to compete.

The big questions: Is it always going to be this way? Is public education just one of these intractable institutions that is going to move forward at a glacial pace and, in fact, jeopardize the nation's future economically? Or is it possible that the kind of changes written by technology that are sweeping the planet and transforming every other industry might, in fact, transform public education and make it much better for our kids?

I'm going to share with you a few stories about the potential of technology and then Terry is going to tell where we think technology is going to take us. I'm going to tell you a few stories about different places around the country and around the world.

I'm going to start with a very unlikely place: Midland, Pennsylvania. Midland is a small town just outside of Pittsburgh. It's a former steel town, once the thriving home to Eastern European immigrants, with a major steel plant—a place that did very well in the 1940s, 1950s, and even in the 1960s. In the 1980s, the steel plant closed and businesses and people began to flee, and the little town of Midland had to close its high school. They had an elementary/middle school, but they couldn't afford to run the high school. They began sending their high school kids to neighboring school districts for their education. That really didn't work out so well: At one time, a neighboring district—believe it or not—cancelled its contract with Midland because one of the kids from Midland became the starting quarterback, and the neighboring high school didn't like that.

By the late 1990s, they didn't really know what to do for their high school kids. Nothing was really working satisfactorily. But the State of Pennsylvania, at that point, had passed charter school legislation, and Tom Ridge, the governor, was a fan of what at the time was a very fledgling industry called online education. Ridge went to

Midland; he encouraged the superintendent there to try to set up an online school for their high school kids.

The school district got a grant. They said, “What the heck?” They hired some neighboring teachers part time to create an online charter school. They opened it in 2000. They were expecting maybe 50 kids to attend. The first year, somehow or another, 500 kids signed up, and each of those kids brought with them an average of about \$9,000. Suddenly, Midland had \$4.5 million to support this little high school. They began investing and making it better and better, and over the next decade, little Midland, Pennsylvania, became home to the largest online charter school in America, now serving 8,000 kids.

They did this through innovation. They did it by reinvesting the dollars that came in—they did it by doing a really good job for kids throughout the whole state of Pennsylvania who were not succeeding in their regular high schools. They did it through an online program that tailored education to the individual needs of the students and allowed students to move at a self-paced rate through the curriculum. They did it with multimedia online, the kinds of things that kids can’t get in a regular classroom. They did it with customized assessments so that they could see whether the kids were on track, whether they needed extra help with something. They did it by bringing teachers online. It’s not just computers but teachers working with kids online. They did it by trial and error, working on a program that eventually would be successful.

The PA Cyber School—that’s the name of it—is now graduating 1,000 kids a year and is making AYP (Adequate Yearly Progress), the federal standard for academic performance. They’re doing it with a relatively small number of teachers online. The student/teacher ratio for the school is about 35:1, and they’re taking all the money that comes in and reinvesting it in building stronger curricula and stronger systems. It’s been extraordinarily successful, and it’s set off all kinds of competition in Pennsylvania.

Let me go elsewhere, all the way around the planet, to Gurgaon, India. Gurgaon is one of the burgeoning business centers in India. For the last 20 years, India has had the most rapid rate of economic growth in world history. They have 250 million people now in their middle class. They add one percent to the middle class every year. There’s an incredible demand for education. They also have incredibly bad schools. They have a million schools over there. We have about 100,000 in the United States. They have class sizes of 50. They have teacher absenteeism rates that average 50 percent on a daily basis; classes then have to double up. What they found is that traditional education is not working there, and they can’t hire enough teachers or build enough schools to make it work. So technology companies have stepped into the lurch and have begun developing online lessons. They’re able to develop all kinds of technology tools to support education at a *fraction* of the cost of things developed here. Thousands and thousands of classrooms in India now are supported by various kinds of online instruction that we can’t even imagine in the United States.

Pearson Education, the large international education company, recently bought half of an Indian company called Educomp Solutions, Ltd., the fastest growing education company in India. Pearson made this investment because of what they see in technology innovation internationally. I mention this example because in other corners of the world where they can’t rely on the traditional education system, they’re very rapidly introducing technology and helping kids in ways that the traditional school system cannot. That kind of competition and that kind of innovation are going to come from overseas to this country.

Another example is Dayton, Ohio. Dayton is a very down-and-out town, losing kids, losing teachers, and losing its economic base. Dayton is the most or second-most highly penetrated city in the United States in charter school access for kids. A couple of charter schools there that serve highly disadvantaged kids invested heavily in the use of technology several years ago. They found that

inner-city kids ranged widely in skills, with some kids in third grade who couldn't read or put letters together into sounds. The best urban teacher in America is not going to be able to reach all of those kids.

They built large instructional spaces that could hold 60 or 70 kids at once, and with technology, allow one teacher to supervise that classroom. They introduced all kinds of instructional technology to allow kids to develop their phonics skills, while other kids are developing their higher-level writing skills—all in the same classroom. You go to a regular classroom, and you'll see kids antsy around, poking one another, having trouble concentrating, and having trouble focusing; you'll see teachers struggling to maintain classroom discipline. You see that all the time in inner-city schools. You go into these large labs, and the kids are completely engaged and working technologically.

Technology is intuitive for our kids today, whether they're in the inner cities or the suburbs or wherever. These schools have made extraordinary achievement gains. They've used technology to reduce the number of teachers they need. When kids are working in these large labs, they don't require the same number of teachers to supervise them. Thus, they reduce the number of teachers in the building, and they use the money that they save both to invest in the technology *and* to provide performance pay incentives for the teachers. Dayton is a great example of how technology can differentiate instruction for kids, make it possible to reach kids on a more individualized basis, and substitute technology for labor.

One more stop on this travelogue: New York City. Michael Bloomberg was first elected mayor in 2001. He's an unusually courageous, powerful, *extraordinarily* wealthy political leader who has a way of getting done what he wants done. He was able to persuade the legislature to give the mayor control of the city schools, cut down a lot of the politics, and hire Joel Klein, a remarkably bright and great education leader, as chancellor of the New York City Department of Education. Klein

began trying to introduce reforms that to him, as a business type, made sense.

One of the things he observed in the private sector was the power of transparency—how powerful it can be when you have information about exactly how things are going. The more information you have about how you're doing, the better able you are to improve what you're doing. So Klein had the idea that we ought to try shining a bright light not only on the performance of schools but on the performance of kids and the performance, in particular, of teachers. One of the most consistently strong findings in all of education research is something that parents have known *forever*; that is the most important in-school factor in whether your kids are going to learn is the quality of the classroom teacher. There have been lots of policy debates about whether teachers are interchangeable. They're not interchangeable! There are *great* teachers and there are *lousy* teachers. Yet we've never had good information about that. So Klein took advantage of student test scores and all kinds of information about the students' backgrounds and the teachers who taught them to create an information system to allow administrators and to evaluate *objectively* which teachers were being successful and which ones weren't.

With that kind of information, which is absolutely feasible today given the benefits of technology, it's possible to make really smart management decisions about which teachers are the stars who can be used to mentor other teachers—and sometimes, which teachers really have to be shown the door because it's not the right profession for them. Information technology has the potential to help schools reach the kids and manage what they're doing in ways that the best private sector companies do. That holds enormous hope.

Those are four examples of frontiers where we see incredible promise from technology: (1) online instruction; (2) instructional innovation coming from abroad; (3) schools changing the mix of education technology, creating what we call hybrid environments where teachers are more productive

and paid better and kids can be more successful; and (4) the power of information and transparency for shining a bright light on what's happening. Those are examples of the way we think education can be transformed for the benefit of kids as well as educators and the entire system.

The potential is there, but there's not a lot happening. The *big* question: What's it going to take to get us over the hump? My colleague Terry Moe will now address this question.

Terry Moe: For all the reasons that John just discussed, we think technology has the capacity to transform America's schools. But the question is: Will that potential be realized? To provide an answer, we need to move beyond the story about all the great things that technology can do and recognize that there's also a darker story that needs to be told—a story of politics and a story of power.

John talked about PA Cyber, that great innovative school in Midland, Pennsylvania. Well, the rest of the story is that PA Cyber was basically taking kids away from other districts in the state; that's why it was so successful. But the other districts didn't like it. So school administrators and the teachers' unions in Pennsylvania went after PA Cyber and *all* the virtual schools in Pennsylvania. They went to court. They went to the legislature, trying to get the laws changed, trying to slash their funding for online education, ultimately hoping to put them out of business. It turns out the assault didn't work, but virtual schools are constantly under political attack. In other states—Wisconsin, Indiana, California, Oregon—all these schools are under attack, and many of these attacks have been quite successful.

Take another example that John mentioned: Joel Klein in New York City. What was he doing? Among other things, he used technology to get detailed data on how much kids were learning and then used that information to evaluate teachers, to figure out how successful teachers were in the classroom. The rest of the story is that the teacher's union got the state legislature to pass a law that

made it illegal for *any* district in the whole state of New York to use test scores as even one factor in the evaluation of teachers for tenure. So the technology is available. The data are there. You just can't use them. It's illegal.

As you can see, the force of technology is up against a counterforce. The reason is that technology is so transformative and its potential is so great that it's threatening. The defenders of the system are led by the teachers' unions. The teachers' unions, by any measure, are *by far* the most powerful force in the politics of education, and they're leading the charge.

Any time you say something like this, you get accused of being a union basher, but I'm a political scientist, and I just want to tell it like it is. This is the way it is. Anybody who knows about the politics of education knows this is true. The National Education Association and American Federation of Teachers have four million members across the country. They have activist members in every political district in the country. Taken together, they have been the number-one political contributor to federal election campaigns since 1989. They are the number-one contributor to political campaigns in about 40 percent of the states. If you look at whether they're just in the top three or four contributors in a state, which still makes them big-time players, it's about 75 percent of the states. They are *huge* forces in politics. I think many people would say they're not just the most powerful groups in education, they're the most powerful groups in American politics, period.

So the question is: Can the teachers' unions and their allies block the advance of technology? For starters, they've been blocking everything else for the past quarter century. Ever since the National Commission on Excellence in Education issued its *Nation at Risk* report and warned of a rising tide of mediocrity in America's schools, this nation has spent billions of dollars trying to reform our schools and significantly improve student achievement. It has been a *colossal* disappointment. Why? It's basically because the teachers' unions have been



very successful at blocking reform. This is no surprise. The American political system is set up, as you all learned in civics class, to be filled with checks and balances, all sorts of veto points. In order to get anything passed, you have to succeed at every point along the way. Yet if you want to block, all you have to do is win once, at one of those points. The unions have been blocking major reform efforts—real accountability, real school choice, pay for performance, getting bad teachers out of the classroom, and lots of other things—for 25 years.

The question is: Why won't they just block technology? The reason is that technology is not really an education reform. It's not like accountability or choice. We're all in the midst of a revolution in information technology that is transforming human society everywhere in the world. The education system is caught up in this. This revolution is *huge*. It is everywhere. It's one of the biggest forces ever to hit the world. The unions can block proposals in politics, but they can't really stop technology from shaping our society, from shaping our attitudes, from shaping what parents and kids want, from giving rise to entrepreneurs all over the place who are developing new things for education and pursuing them in various ways. So as a result, technology is going to seep into the system. It's going to seep in slowly because the unions are trying to block it, but it is going to seep in.

It also turns out that as technology seeps in, it has a variety of consequences for the power of the unions—consequences that are going to transform politics. When everybody thinks about technology in education, they think about how technology is going to affect the classroom and affect student learning. The key to the whole thing is that technology also transforms politics, and it's *that* transformation that's going to allow the educational transformation to happen.

Here are a few reasons how and why it does.

One. Technology enables a substitution of technology for labor. That's what it does in other industries. That's how we've increased productivity

over the centuries. We've never been able to do that in schooling—until now. Now, we have ways for computers to do a fantastic job of teaching kids, taking a *lot* of the teaching load—not all of it, but a lot of it. What that means is that we can use a lot fewer teachers to educate kids. What that means, also, is that the teacher-to-student ratio is going to go down over time and the union-member-to-student ratio is going to go down over time. Numbers are hugely important to the unions' power. They need the money that comes from those numbers, and that's going to go down.

Two. The geographic concentration of students and teachers in districts is going to be changed. If students start taking a lot of their courses online, then the teachers won't have to be there. The teachers could be anywhere, and, increasingly, they will be. As soon as teachers are no longer concentrated in the district, and they're anywhere, then they'll be hard for the unions to organize. This will be a big deal as it plays out over time.

Three. There are going to be all kinds of choices for students and parents—state-level virtual schools, virtual charters, or whatever. As kids start using these schools, then money and jobs are going to start flowing out of the regular public schools. That, too, is going to affect union membership.

Four. Technology also enables the measurement of performance, like Joel Klein is trying to do in New York. It's because of technology that the accountability systems that are in place have revealed bad performance. Information has caused many representatives of minorities and disadvantaged kids to stand up and say, "All right, we've had it. We're not going to take this anymore." They, in the past, have been in alliance with the teachers' unions. That alliance is breaking down. This aspect of technology is important, not because it undermines the power of the unions directly, but because it mobilizes others against them. This is a *truly* important political development.

At any rate, we think what's going to happen over time is the power of the unions is going to go

down. It's not going to go away, but it's going to go down. As it goes down, they'll be less able to block, and as they're less able to block, not only will technological innovations go through, but all the other reforms are going to pass. Thus, we're much more likely to get *real* accountability, *real* school choice, pay for performance, bad teachers out of the classroom, and so on. It's not just about technology transforming what happens in the classroom. It's about technology freeing the schools from the iron grip of special interests and making it possible for the nation—for the first time in modern history, really—to do what's best for children, for schools, and for quality education.

After their remarks, Drs. Moe and Chubb answered questions from the audience.

Lee Rademacher: Homeschooling seems to be growing. Could that be exploited with technology?

Moe: I think this is a huge benefit to homeschoolers. A lot of people in the public sector treat homeschoolers as undeserving. They have a right to education just like anybody else. All of a sudden now, they have available to them the best the world can offer: whole curricula available to them—with teachers. They have rich schooling opportunities available to them. They can couple traditional homeschooling with online schooling. I think it's very exciting and very important, in some sense, for incorporating homeschoolers back into the education system, but still offering them the autonomy they want to retain for themselves.

John LaPlant: How likely is it that the unions will be able to retain their power, even in virtual schools? I notice that two of the states with vibrant virtual schools, Wisconsin and Pennsylvania, are pretty strong union states. How are these schools able to get by?

Moe: Basically, unions have a very difficult time organizing charter schools. Only about 12 percent are unionized. The unions also have a very difficult time organizing private schools. I think teachers in charter schools and private schools are basically

happy with what they do. They choose to be there. There are a lot of them. Plus, as virtual schooling grows, in some sense, the schools are nowhere. So it's not like the unions can go somewhere and find a whole bunch of teachers who work for a virtual school. It may be that some virtual schools are organized that way, but in many cases, the teachers might not be there. The teachers can be all over the place. That kind of fragmentation makes it even harder for the unions.

Also, competition makes their job much more difficult. A competitive market would put unionized schools at a disadvantage. There are going to be a lot of virtual schools out there, and if the unions move into some of these virtual schools and do what they normally do through collective bargaining and heap restrictions and costs onto the schools, then those schools are going to be at disadvantage relative to others, and they might go down.

Chubb: Virtual schools are also private entities, so they set their own work rules. They set their own pay policies. They're competing for teachers, so they'll pay more. They'll provide more flexible hours. Therefore, their teachers will be asking why they should want to join a union when they're getting benefits and working conditions that are superior to what the union is providing in a public school district.

Ruth Usem: As a student in the School of Education at the University of Minnesota, we were challenged to teach the *whole* child, and that means socially as well as cerebrally. I wonder how you address that issue.

Chubb: That's a great question and one we get all the time. Nobody knows what a future system of public education would look like. With technology, it will make it possible for kids never to leave their homes to be educated. That's probably not what most families and most kids would choose, and our guess, in the future, is that schools will be places where kids will come and socialize. They will learn how to debate and discuss and work together in teams, and they'll build friendships that way.



They'll be on sports teams. They'll sing. They'll dance. They'll do all kinds of things that they currently do in schools. The difference is that their instruction will be different, so they'll have much more opportunity to learn using technology. They'll have much more opportunity to learn on their own, at their own pace. The socialization will be there, but the instruction will be enhanced through technology.

Moe: There's a community aspect, too. I think it's an especially important part of it. Most older people tend to think about community and socialization as being *only* face-to-face kinds of things. That's an old-fashioned way of thinking about socialization. Think about the way kids interact today. They do it through text messaging, cell phones, e-mails, Facebook, and My Space. For them, this is life. My daughter must interact *ten times* more than I ever did at her age. If you ask these kids, "Are those interactions meaningful to you?" they'd say, "Of course!"

We tend to think that socialization and communication have to happen in one narrow way. It's just not true in the modern world. There's so much that can happen virtually that is really very healthy for them and that adds a whole new dimension to their lives. I would just add that, in many of these cyber schools, kids are interacting virtually with kids who live in India or who live in another state or whatever. In many cases, there's a lot more interaction among students than there would ever be in a typical classroom and also more interaction between teachers and individual students. We just have to learn to appreciate this and think about all these interactions in a different way.

Devin Foley: What sort of organic mobilization by parents and students at the local level is effective in bringing about change—more choice and more options?

Chubb: Before a state authorizes online education, there are usually only the companies that would like to do it and sort of a hypothetical idea that

it's a good thing. Once it's authorized and it takes off, suddenly there are thousands and thousands of parents whose kids were not being well served by the traditional schools and who want to move online, and they do move online.

To give an example of organic mobilization: Back in June in the state capital of Ohio, Columbus, there was a pitched battle, which had been going on for months, about how to balance the state's budget. Gov. Ted Strickland, who is an outspoken opponent of choice and charter schools and online education, had imposed a moratorium on charter schools and on cyber schools. In the budget battle, he and his allies proposed a budget that would have slashed funding for charter schools and online schools in particular by breathtaking amounts. Five thousand online parents marched to Columbus just to show force. They were met on the steps of the Capitol by leaders of the legislature who were on their side. This is much like any other politics: Once the genie is out of the bottle and it's possible for people to participate, there are constituencies. If you go to a charter school rally, it's economically disadvantaged folks, children of color, and so forth. The politics change when you give people the opportunity.

Mary Ann Van Houten: Many wonderful innovative teachers are afraid of the union. In my experience in working in schools, they are hesitant to speak up, as are many superintendents, because the wrath of the union leadership can be strong. How do we separate the best teachers who are advocates for kids from that blind advocacy of the union leadership that silences the voices within their own membership?

Moe: I would just say that the best way to approach this is to give them options. Charter schools, right now, offer many teachers options. They can leave the union. They can have a different life in a charter school. Virtual schools do the same thing. I think what this technology revolution is all about in different terms is choice. It's about generating all kinds of new options for kids and for families and also for teachers. The solution doesn't lie within the union movement. The unions are not going

to be fundamentally different in the future. Their job is to promote the occupational interests of their members. That's what they've always done. That's what they'll always do. So what you need are just a lot more options, and those teachers will have places to go and new lives to lead.

Chubb: Before I joined the private sector, I wrote about all the obstacles that the public sector presented. Now that I've been in the private sector for 15 years, I believe even more that the public sector and the policies of the public sector can either be a great facilitator of progress and innovation or can be a tremendous impediment. Technology is going to happen whether anybody likes it or not. We believe this is going to be a very, very positive thing. Policymakers, make no mistake, are going to have a huge influence on whether this happens.

I'll conclude with an anecdote that makes this point. I live in the State of New Jersey. In New Jersey, we're not allowed to pump our own gas. Self-serve technology has been around since the 1960s, but there's a powerful organization that protects the people who pump the gas. Here we are in 2009, and as a resident of New Jersey, I'm not allowed to pump my own gas. If anybody thinks that politics can't get in the way of technology, come spend a day in New Jersey, and you'll see what it's like.

If you're a policymaker, pay attention to policies which can make a big difference when it comes to technology. If you're a citizen, let your policymakers know that you want to have policies that are going to allow technology to move forward and make a better day for our kids. ■



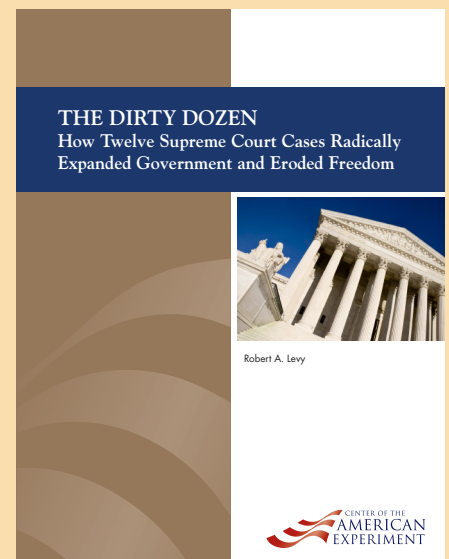
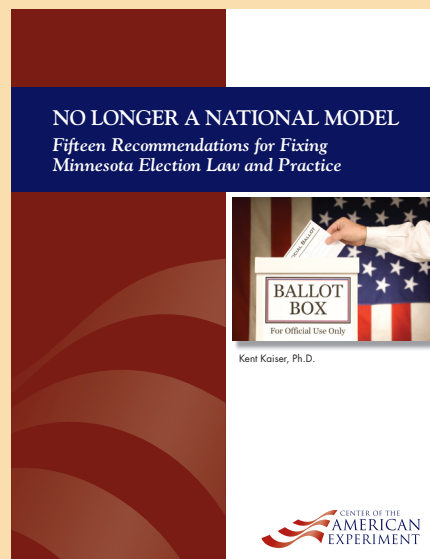
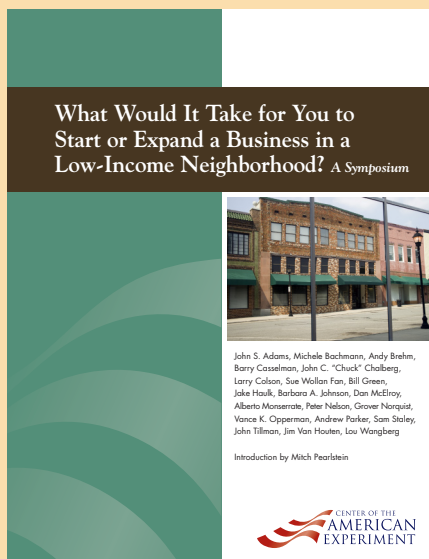


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