CHANGING THE CULTURE OF AMERICAN SCHOOLS

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The importance of the two CED reports cannot be emphasized enough. This country has changed very rapidly. Just a few years ago, a majority of voters had kids in school, and now only about 21 percent of voters do. That's a major political shift. That means that unless some other group with interest, compassion, and concern moves in, interest will move away from children. And the children are the future of the country. So the importance of these reports in signifying a political commitment — and I start with that just as one aspect of these reports — cannot be overestimated.

Second, of course, is the very rich content of the CED reports. There have been many education reports with good content. I agree that we should have a core curriculum and standards in schools, and that we should test teachers before we hire them just as we do in most other professions. What we were saying in the CED reports was not to do away with those reforms, but that they are not enough. Every society, every company, every system needs some regulation from above. But we know that regulation doesn't bring the creativity, the commitment, or the sensitivity that are necessary for good schools. Good schools come from hard work. And that you don't get from top-down reform. So, in the middle of all these top-down recommendations, CED came out and said: Those reforms are not enough. They are a beginning and that is fine, but we have to move from there. That was CED's major contribution. Nobody was saying that at the time.

Third, the reports are significant because they are not mere laundry lists

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of items. They contain sophisticated analysis and develop gut-level priorities about when the most good can be done, like the early childhood emphasis, which is obvious but unfortunately nobody else was talking about it. CED recognized that if you damage the brains of a child before you ever get him or her at school or work, that's it. So the first thing you do is prevent those types of damage that you can't undo later.

Finally, the CED reports are significant because they are not just reports. There is a commitment to implementation that doesn't exist with any of the other reports. The reports don't just result in

a press conference, in a few days of headlines, or even in a few bits of testimony before Congress, but there is an effort over a period of time to follow through.

All of these are of extraordinary importance.

The differences that Brad Butler has with the Secretary of Education are basically differences not on ends but on means, and that is true for me too: we disagree not on where we should go or what type of citizen we ought to produce or what values we should encourage, but on how it can be done. I think that what we need to change is the corporate culture of a mass institution, public education.

So I am going to focus on the process of changing the culture of the schools. At the same time, we will work very hard to make sure that we win on these issues of ensuring the right prenatal health care and that little kids have that high-quality early-childhood education. The Perry Preschool Project convinced me for both humanitarian and economic reasons that this kind of investment pays off. But it pays off in certain ways, and we ought to be clear about that. The kids that get in this kind of program don't drop out as much, don't get pregnant as much, and are not as involved in crime or drugs. They are much better citizens. They stay in school longer, and they perform a little better — but only a little better. The follow-up study of the Perry Preschool Project doesn't say that these kids really go on in huge numbers to college or that they really become part of that 5 percent of truly literate people or anything like that.

It is an important accomplishment in itself to have people who are citizens and participating, who are not addicts or criminals or filled with hatred. But we can do better. And whether we do better or not depends on what we do with those kids after they have had the right start. So I would like to talk about what the rest of the system does with them and the kinds of changes and help that the schools need.

Failing Abilities

I think that many of you were shocked when Brad Butler said that the reason the CED reports didn't emphasize foreign languages is that only about 5 percent of graduating high school students know English. What I'm pointing to is that the question of how much change our schools need depends on how well we are doing now. If you have a company that is doing pretty well and you are turning out 5 percent lemons or 10 percent lemons or 15 percent lemons, then most of your products are turning out all right and you just have to improve your quality control a little bit. But if you were turning out 90 percent lemons, you would rethink the whole process. So it is important to start with that question, "How are we doing?" before we start thinking about what we need to do.

Well, there is an analysis of how well we are doing. There is a federally-sponsored testing program that has been around for about twenty years called the National Assessment for Educational Progress (NAEP).

These are some of their results. A sample of seventeen-year-olds still in high

school — the dropouts are not tested, so these are the kids who are going to get diplomas — is given a writing exam. They are told to write a letter to the manager of a supermarket applying for a job, and to remember to give him some good reasons to hire you, since a lot of people are applying. Spelling and grammar don't count as long as the letter can be read. What does count is: Can the student offer a few arguments? Can he communicate and persuade? Can he say something like, "Hire me because I worked in my uncle's laundromat, so I know how important it is to come on time. I know that you are counting on me. I know how important it is to count change correctly" — something like that, something that connects. Another example of a NAEP writing test is "Write a letter to your principal urging him to change a school regulation." Twenty percent of the graduating seniors can write adequate letters like that — only 20 percent.

Another part of the assessment asks the graduating senior to arrange six common fractions, like 1/2, 2/3, 3/5, into size places from smallest to largest. The percentage of students that can do that is 12 percent. Now, remember, this sample doesn't include the dropouts.

In the toughest part of the test, you give a kid a bus schedule and you ask, "You want to get to Washington, D.C., just before six o'clock on a certain day. Which bus do you have to take from Philadelphia to get there?" The percentage of kids who were able to figure out a timetable, which of course corresponds to a spreadsheet or a chart in a newspaper, is 4.9 percent.

If you take all minorities out of that sample, it's 5.9 percent for whites — 5.9 percent.

I think that answers the question as to how well we are doing.

This is not a question of having a small number of rejects. It is a question of a system that is systematically producing lemons. It is a lemon-producing machine.

Unlike Bill Bennett, I do not believe that there was ever this great golden age when everybody graduated and knew all this stuff; that somehow we were infected with some evil virus or some terrible philosophy and we fell back from the standards that we used to have; and that if only we returned to those standards everything would be fine.

I went to schools in this city in the 1930s and early 1940s, and it was a very different world. The family was intact. I never heard of drugs when I was a kid. There was no automatic promotion or graduation. There were tough examinations. There was lots of homework. The three biggest crimes that kids committed in school were whispering, passing notes, and chewing gum, and if I ever came home and said anything bad about the teacher, I got it from my parents. Was it a great education? Sure it was. Here I am.

But only 20 percent of the kids graduated that year, and 80 percent dropped out. But you didn't have the kind of headlines we see today, because, as Bill Woodside said before, dropouts had something to drop into, at least after Lend Lease and World War II started.

So, the schools are doing better than they have ever done before: We are

keeping more kids and they are learning more than they ever did before. It's just like the cars we produced in the 1970s. They were a lot better than the cars we produced in 1950. But the 1970s cars failed because they had competition from the Japanese. There weren't any Japanese cars in 1950.

The schools are facing the same problem that a lot of American industry is facing. The products of the 1970s that are failing are a heck of a lot better than what we used to produce, but they are just not as good as what the competition is producing. The world around us has changed, and we are meeting a different type of competition. That analysis is something we need to share with school people, so that when we talk in these ways they don't feel that we are dumping on them. It is terrible when you are doing better than you ever did before and someone comes along and tells you what a big failure you are. You really feel it, especially because you are doing better than you ever did before. But it turns out to be not good enough any more.

How to Make Schools Work

So what we need to ask ourselves is, why these bad results? Well, you can adopt the theory that God or Darwin only makes 4.9 percent of us smart enough to read a timetable. But I don't accept that. If you don't accept that, then it seems that we have to entertain the notion that there is something in the process of what we are doing in our educational system that gives us those results, and if we would rethink that process then we would be able to do something better.

So I would like to share with you some of my thoughts on bottom-up restructuring. There are two difficulties with this kind of change. One, it will be very difficult to bring about change from the inside. Second, even if the people on the inside are willing to do it, the change is so substantial that they will need support from the outside, because the institution will look very different when we are finished. Sometimes when you try to change schools for the better, you may have poorly-educated people who graduated from the last generation of schools walking in to demand that their kids get the same wonderful education that didn't work for them, because they have a particular picture of what school is supposed to be like. We all have a very similar picture of what school ought to be like. Unless there are some powerful forces in our country that say that schools like that don't work very well for most kids and that we have to give people a chance to design schools that work very differently, then we are not going to succeed.

What are some of the problems with the present system? One of the problems is that although we know that every human being learns at a different rate, schools are organized so that there are only about two ways kids are given to learn: You either listen to the teacher talk and remember what she says or read the textbook. If you have to listen to me talk — and that is how 85 percent of teaching is done — then you may learn at your own rate but, really, you better learn at the rate I am talking because I can't talk to each one of you individually.

So we have a classroom system that says that one-third of the kids are going

to be bored because they know the material already, and one-third aren't going to get it because they are a little behind where I am right now. We have a system that is guaranteed to be wrong for two-thirds of the people in the audience — guaranteed.

That means we have to think of a different way of doing it. It doesn't mean that it can't be done.

In effect, children are given only one way to learn, through words, either the words I speak or the words they read. Those of us who are here and who have succeeded academically were people who were able at an early age to do well with words. But most kids can't. Yet we don't say, if you don't get the words, here's a videotape, or here is a simulation game, or here is a peer who understands it who is going to try to explain it to you. We just give them more words or easier words.

If medicine were organized the way our schools are, this is what would happen: you go to a doctor and he gives you a prescription, and a few days later you come back and say, "Doctor, not only didn't this cure me but I have broken out all over." The doctor would look at you and say, "You have a hell of a nerve not responding to the medicine I gave you. What is the matter with you?" That is, we have one way of reaching you, and if you don't respond, if you don't happen to fit the medicine I gave you, I'm going to really dump all over you.

Now, of course, the doctor doesn't say that. He says, "I'm sorry."

Notice the difference right away. "I'm sorry," not, "Something is wrong with you."

The doctor essentially says, "This is a thing that most doctors would have given you, but it doesn't work on everybody, and some have reactions. Here, try this instead. And if it doesn't work, call me in a day or two and we will try something else." In other words, even if you are suffering from the same disease as other people, the same medicine may not work for you.

In schools, there isn't any, "Now try this and now try that," trying to encourage learning through technology or peer tutoring or with groups of kids.

Another problem with the way schools are now organized is that it forces us to humiliate kids. I've read lots of books on management and leadership — it's always been an interest. One of the things that comes up in almost every one of them is, never humiliate the people that you are working with. You can criticize, you can talk about their shortcomings, but never humiliate them.

What do we do in school? After I teach a lesson, I start calling on kids — we call it pupil participation — and I ask questions. Some kids always have their hands raised. They love school. They would come on Christmas day. Others have their hands up half the time and they do pretty well. But then there are always some kids who are sitting there engaged in an unconstitutional activity: they are praying that I not call on them.

But I have to call on them because I have to be fair. What happens when I call on Johnny in the morning and he doesn't know the answer to the morning's question and in the afternoon he

doesn't know the answer to the afternoon's question, and this continues the next morning and the next afternoon? I am publicly humiliating him in front of his peers. What does humiliation do to people? Well, a couple of strong people will try very hard to improve, and a few of them will. But most of them will say, "This is not my game. Don't blame me anymore and don't laugh at me, because I am not trying anymore. And if I am not trying, you can't blame me."

How can we expect people to learn simultaneously? We all go to orchestras and to choirs because it is so amazing when people can perform together. But imagine twenty to thirty people all learning the same thing in the same way at the same time. It's impossible. It doesn't happen. Is there a way in which we can take into account individual learning differences? Is there a way in which learning could be more private?

Another issue has to do with the fact that teachers and students are isolated. Even if some teachers have some good ideas, they don't have the time or opportunity to share them with anybody else. We do a similar thing to students. If two kids are talking to each other, we separate them. If they pass notes to each other — God forbid they should learn to write that way — it is called a crime. Then if they still continue to communicate, we move them to separate rooms. But one of the greatest instincts all human beings have is a desire to be a part of a group. We ought to take that team spirit that gets people to work together on a sports team and apply it to learning. The Japanese do that by breaking down their very large classes into smaller groups. There's no reason why we can't use the team concept for students and teachers.

Another issue is that schools are organized according to a time span that is, by and large, annual. You enter in September and you say, "When is my final mark?" "Next June." It takes quite a person to realize that this is September 5, and my final mark is next June 20, and that what I do today, on September 5, this afternoon, tonight, tomorrow, and the next day is going to make a big difference on June 20. Most people aren't built that way. Just try it with some of your employees. Give them their check in advance for ten months. See if they realize that what they spend every day has an effect on the outcome.

What happens, of course, is that a lot of kids say, "Hey, I am not going to do my work tonight, I've got plenty of time." And before you know it, they are too far behind, and then they are being humiliated. Then they have two choices. They can stay and be humiliated, or they can drop out. When can they drop back in again? A year later, with a bunch of kids who are a year younger than they are, after being told their entire lives that they should be with their own age group.

A Problem of Organization

Let me share something with you which was said by Charles Handy, a British management guru who has written a book on schools. Of all the jobs in the world, he said, of all the types of employment, being a student in a school is most like being an office worker. You've got to read reports,

write reports, and listen to instructions. It is not like coal mining, or working in a mill, or working on a ship. It really is closest to office work of some type. Now, suppose that you were in charge of running an office and you had a new employee and you said, "Al, here is your desk. You sit here. You see him? That's your foreman. Your foreman is going to come over here and tell you what to do. You have twenty-five other people sitting around here, they are doing exactly the same work, but don't ever talk to them. When your foreman gives you the work, you will do it, and forty-five minutes from now you will hear a bell ring. When that bell rings, you will stop doing this work, you will leave your coworkers and you will leave this foreman and you will move up two flights of stairs and go to another office where you will be given another desk and have another foreman who will give you a totally different type of work to do and you will have another twenty-five people sitting around you. You must also never talk to them. And every forty-five minutes you will have a different boss and a different kind of work to do. Good luck, Al."

Well, nobody would organize an office that way and expect to get any work done. Imagine relating to a different supervisor or manager every forty-five minutes. It's hard enough to relate to one. That is why we have unions!

You would never organize an office like we have organized schools. It takes time to get accustomed to your boss and your work. And one of the best ways to learn is to ask the people sitting around you about the task. But we organize the American secondary school in just the opposite way — and it's very confusing to the students, just as it would be to the adult office worker.

By the way, if the student is viewed as an inanimate object being moved through an assembly line, and if the teacher is viewed as a worker who educates the child by tightening this nut and tightening that bolt, then the business of moving the student every forty-five minutes makes sense. It's an old fashioned production process. But we should view education as something that nobody can really give you: People educate themselves. Those of us who are outside can help in different ways, but, in the end, you educate yourself.

It's not the teachers who should be the workers; it's the students. If we view students as workers, then teachers and principals and superintendents and school board members could engage in the same kind of thinking that people in business do. The question you ask is, "How can I get the most out of my employees?" If you view the student as an employee, he can do an awful lot to botch up the work — he can just serve time, he can be uninvolved, he can make a lot of mistakes; or, he can be concerned with quality, he can make suggestions that help you shape your business, he can give you information, and he can help you.

That is the change in culture that is needed in the schools. It is exactly the change in culture that has taken place in a lot of businesses in this country that want to become more competitive.

I want to speak briefly about a school that I saw. It is an example of how a few simple changes can bring big improvements. The changes are kind of simple, in a way.

What One School Does

I visited a school in Germany last October. It's an urban school. These are not just obedient German kids who salute and obey and do everything they're told. These are Turkish and Moroccan and Greek and Portuguese kids. It's a tough school. The school goes from fifth grade to age nineteen. These are the kids who flunked the test in fourth grade that determines who goes on to the elite academic track; they are the bottom 75 percent of the class. Many of them are immigrants with linguistic and other problems. It is a large school of 2,200 kids that has been in existence for seventeen years.

What is different about it? If I am a teacher in the school, the first day I come in I do not meet the kids. Instead, I'm told, "Al, we want you to meet the other six teachers who are members of your team. The kids aren't coming in for a few days."

The first thing your team has to do is go through the records of about 100 kids and decide how to allocate the kids into classes based on their record cards. The very people who are going to be working with the kids sit and think about how to group them.

The second thing about this school is that there are no bells. You as a team will set the schedule from week-to-week or day-to-day or month-to-month. You want to change every forty-five minutes? You want to have a whole morning for German, an afternoon for mathematics, so the kids have enough time to get into something? You want to spend a whole week on something? You are the team and you make those decisions, based on what the kids need, what they are able to take, and how long they are able to stick with it. And if you make a mistake, you can change your decision.

Third, you will make decisions as to which of you work with which kids and which subjects, depending upon your interests.

The next thing they tell you is that they will never hire a per diem substitute if anybody is absent, so organize yourself so there is no crisis if one or two or three of you are absent. Why? They know the kids just develop disrespect for authority by running rings around the subs, screaming and yelling and throwing paper airplanes, and it is an absolute waste of money. So the school administration has given you an extra member of your team by keeping the money that would have been spent on a substitute; you have an extra person there, but sometimes you will be a little short.

Another unique thing about this school is that that team of teachers will be with the same kids from the fifth grade until they graduate at age nineteen. You will not be able to say you inherited a group of kids who were spoiled by the teacher the year before and you can't wait to get rid of them in June and pass them on to someone else. Whatever you or a member of your team does with these kids that is stupid you are going to live with for a long time. And everything that you do to help to build them, you are going to enjoy for a long time.

They are taking a system where no one is responsible and no one cares and turning it into a moral community. Furthermore, they don't need any

inspectors to come in and say which teacher is good or bad. If you are working in close quarters with the teachers on your team, and you know you are going to be with them for so many years, you will either shape up or get rid of someone who is not contributing. So you have an accountability system that is built in.

Furthermore, without adding a day, this school actually adds about six weeks to the school year. In a regular school, where teachers have twenty or thirty kids in a class, five classes a day, 100 to 150 kids, it takes many until Thanksgiving to learn even the students' names. And what happens at the end of the year? You pack up three weeks in advance, collect the books, give the finals. So you lose four or five weeks at the beginning and three weeks at the end. But in this school you have the same kids year in and year out. You never pack up. You don't have a new name to learn. You have an additional six or seven weeks of actual education going on without adding a single day to the school year for either kids or teachers.

The classroom organization of this school is different, too. The kids sit at tables, and are supposed to coach each other as if they were ball teams. Each table group works as a team. The tables compete with each other. No kid ever shows his failures to any other team. You are not a good catcher? We will practice catch right at this table. You are not a good runner? We will practice running. You are not a good hitter? We will practice hitting. You are on our team, and how you do affects us. We are going to make it work.

I want to end this part and then rapidly conclude. Notice what we have here. A team of teachers. The kids are busy working themselves, so the teachers have time to work individually with kids. They have time to talk to each other while the kids are working. The teachers are not spending all of their time lecturing to a bunch of kids, 80 percent of whom are sleeping or not listening anyway.

This business of saying, "Let's have a better teacher, a better lecturer, a better textbook," for an audience that is not able to listen doesn't do any good. The better lecturer will help only the listeners, and research shows that learning through listening characterizes only a very small percent of the population. But in this German school, teachers are free to do a lot more than lecture. The teachers have time to talk to each other, they have time to ask, "Why haven't we been able to reach Johnny or Mary? What can we do that would?" They have time to mark papers, they have time to coach youngsters individually.

So with just a few changes and a team of teachers and teams of youngsters, you get relative privacy at learning, an ability for the students to move at their own rate, and an ability to teach something that is very important in the outside world, which is to work with a group of other people to accomplish an objective.

This also illustrates something else: that the answers to education are a lot like the answers to business. These teachers are doing research as they think about what works and what doesn't work. We need research done by teachers in school, and not only the

kinds of research done by the Department of Education. If you give the workers who are working for you a little time to communicate with each other and to communicate with the people who are in charge, you will get a lot more improvement than you will out of a study that is very abstract and very academic. I am not against abstract studies. But I am also for more school-site research by the teachers in these schools.

The school in Germany does a lot to develop a team of kids and a team of teachers and to create a family spirit and responsibility. But it trades something off. Not all teachers feel equally comfortable with fifth graders and nineteen-year-olds. Not all teachers feel comfortable with the range of subject matter. Do you have to keep the groups together for that many years? No. You might want to keep them together for three years instead of seven years, or whatever.

But this is the kind of thinking that doesn't exist in our schools. Instead, we take for granted that there are classrooms; when you come in as a teacher, you will be assigned to that classroom; you will stand in front of that assigned group; and you will teach assigned lessons with assigned textbooks. There is no thinking, for example, about how to group the kids in ways that don't make them miserable so that they give up. The whole question of how to group people in order to give them hope and faith in themselves is something that people have to think about. In this German school, for different subjects they can move kids to different tables so that nobody is at the bottom of a group all the time. Each child will have the experience both of being strong and weak at something. And for the kid who is weak at something, there's the experience of the table group, which has a responsibility, along with the teachers, to move that child along.

Building the Momentum

What I am saying is that without major restructuring of schools, we will have much better citizens with an early-intervention program; we will have a lower crime rate, less pregnancy, a higher graduation rate. It is worth it in and of itself. But I am saying that if you add school restructuring to that start — if in addition we follow up and rethink what we do during the next groups of school years — we can get a better outcome than the 5 percent of students who know English well or the 20 percent who can now write a decent letter.

In our big cities, as long as you have the crime and the kids walking around with beepers — not because they are business men but because they are drug pushers and runners — you can't even talk about these things. In schools where there are drugs, where the walls are falling down, and where there are metal detectors to see if kids are carrying arms — if you go into a place like that and talk about restructuring an educational environment, people will look at you and want to know which planet you're coming from. There is still something special that needs to be done in those places.

But what I am really saying here is that it is not 5 or 10 or 15 percent of the kids that are intellectually at risk, but about 80 or 85 percent of our kids. Most of

them will make it because they have parents who will say, "Here is a connection to a job." The kids who live where nobody is working and everybody is into drugs and crime won't make it. There are two at-risk categories.

What we need is support for teams or groups within schools to try something different. And there are some wonderful things happening.

In Dade County, Florida, they actually had a competition that allowed any school to submit a proposal for school-based management and shared decision making. Thirty-five schools are now managing themselves and trying some very different approaches to schooling.

In Rochester, New York, they said, "We don't have to have all teachers earning the same amount of money on a single salary schedule. We will differentiate, and we will have lead teachers with different roles, and we will provide a real career path in teaching." Right here in New York City, Sandy Feldman of the United Federation of Teachers negotiated an agreement where 75 percent of the teachers in a school can vote to lift certain sections of the contract to suit their particular school's needs. What does that encourage? The principal comes to the union and says, "These rules are kind of stupid." And the union says, "Well, maybe we agree with you, but these management rules are kind of stupid, too." And you begin a process of negotiating deregulation on both sides, so that people can do something sensible.

These are wonderful things that are happening. But as these changes take place, as teams of teachers start doing things that look very different, as they start working in teams with teams of kids, with technology, with different time structures, there is going to be a lot of opposition. People are going to say, "That doesn't look like school to me."

We need a lot of support and a lot of understanding. We also need to change the situation whereby school board members and school superintendents serve such short terms that changes or experiments favored by one administration may be knocked out by the next. As we try these things, it is going to be like developing a new product. We need to say to school boards and to superintendents and principals, "If you have a team that has a good idea and they are willing to try it, you need to protect educational experiments for a long-enough period of time to help them make it."

By the way, if they don't make it, you have to be honest enough to say, "This is an experiment that has failed," so that no one else will ever die of the same cure again.

I would like to express my admiration, Brad, for you. This morning, listening to you and listening to others was really one of the high points of my many years in education. Without your efforts and the efforts of many others — not everybody, unfortunately, as Mike Timpane said earlier — we would not have come even this far. It is your commitment, your insight, and your efforts that give hope that something can be done. It's going to be very tough, but I think we can do it.

BIOGRAPHICAL NOTES

OWEN B. BUTLER is retired chairman of the board of The Procter & Gamble Company and newly elected chairman of the Committee for Economic Development (CED). As head of CED's project on business and education, he chaired the subcommittees that produced the reports *Investing in Our Children: Business and the Public Schools* (1985) and *Children in Need: Investment Strategies for the Educationally Disadvantaged* (1987). Mr. Butler is senior adviser to Daiwa Securities America, Inc.; chairman of the Cincinnati Branch Board, Federal Reserve Bank of Cleveland; and director of Northern Telecom Ltd., Hospital Corporation of America, Deere & Co., and EQUICOR-Equitable HCA Corporation. In January 1988, Mr. Butler was appointed by Governor Celeste of Ohio to chair the Citizens Commission to set forth the Ohio Challenge: Education 2000.

ROBERT C. HOLLAND is president of CED. Before joining CED in 1976, Dr. Holland worked for more than 25 years in the Federal Reserve System, serving as a member of the Board of Governors from 1973 to 1976. He is a member of the board of directors of the National Bureau of Economic Research and a member of the following organizations: the National Academy of Public Administration, the United Nations Association's Business and Labor Economic Policy Council, the Council on Foreign Relations, the Congressional Economic Leadership Institute, the Council for Community-based Development, and the Center for Excellence in Government.

JAMES J. RENIER is president and chief executive officer of Honeywell Inc. He assumed this position in October 1987 after serving Honeywell for more than 30 years. A CED trustee and member of the Subcommittee on the Educationally Disadvantaged, Dr. Renier is a member of the board of directors of the Northwestern National Life Insurance Company, the First Bank System, Inc., the Pillsbury Company, and the United Way of Minneapolis. He is a trustee of the College of St. Thomas, a member of the Business-Higher Education Forum, and a member of the Work in America Institute, Inc. He sits on the board of overseers for the University of Minnesota School of Business, the Business Advisory Council for the Industrial Administration Graduate School of Carnegie-Mellon University, and the foundation Board of Governors for Iowa State University.

DONNA E. SHALALA is chancellor, professor of political science, and professor of educational policy studies at the University of Wisconsin-Madison. Prior to her appointment to that post in January 1988, Dr. Shalala was president and professor of political science at Hunter College of the City University of New York. A CED trustee, Dr. Shalala served as vice chairman of the subcommittees that developed *Investing in Our Children* and *Children in Need*. She has served as a governor of the American Stock Exchange, a trustee of Teachers Insurance and Annuity Association, a member of the Council on Foreign Relations, the governor of New York's Council on Fiscal and Economic Priorities, and director of the Children's Defense Fund, the Institute for International Economics, and the National Women's Law Center.

ALBERT SHANKER is president of the American Federation of Teachers, AFL-CIO. He assumed this position in 1974 after a decade of leadership with the United Federation of Teachers in New York City. Mr. Shanker is a national vice president of the AFL-CIO and president of the labor federation's Department of Professional Employees. He is a board member of numerous educational and human rights organizations, such as the Carnegie Forum on Education and the Economy, the National Board for Professional Teaching Standards, the A. Philip Randolph Institute, and the Committee for the Defense of Soviet Political Prisoners. Mr. Shanker served as an advisor to the CED subcommittees that produced *Investing in Our Children* and *Children in Need*.

P. MICHAEL TIMPANE is president of Teachers College, Columbia University. He also serves as chairman of the executive council of the Center for Education and Employment, a federally funded educational research and development center at Teachers College. Mr. Timpane was an advisor to the Committee for Economic Development's Subcommittee on Business and the Schools, vice president of the Public Education Fund, and adviser to Governor Kean's Teacher Renaissance Task Force of the Education Commission of the States. He is a member of the New York City Partnership's Education Committee, the executive committee of the Holmes Group, the board of directors of the American Association for Higher Education, the Cleveland Conference, and the American Educational Research Association.

WILLIAM S. WOODSIDE is chairman of the board of Sky Chefs Inc. and former chairman of Primerica Corporation. He is also a director of James River Corporation, Onex Packaging Company, and registered investment companies comprising twenty mutual funds of the American Capital Family of Funds. A vice chairman of the CED Board of Trustees, Mr. Woodside served on the CED subcommittees that developed *Investing in Our Children* and *Children in Need*. Active in a number of national and regional civic and cultural organizations, Mr. Woodside is president of the Board of Trustees of the Whitney Museum of American Art, president of the Primerica Foundation, chairman of the Institute for Educational Leadership, Inc., and co-chairman of the School and Business Alliance of New York City.

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