

## LISA C. EGBUONU-DAVIS

b. 1958, SB 1979 (life sciences) MIT, MPH (epidemiology) and MD 1983 Johns Hopkins University, MBA 1988 (health care management) Wharton School, University of Pennsylvania; held posts with the Ohio State Department of Health, 1988-1989, Eli Lilly and Co., 1989-1993, and Lederle Laboratories, 1993-1994, before joining Pfizer Inc.; medical director, Outcomes Research, 1994-1996; vice president, Global Outcomes Research and Medical Services, Pfizer Pharmaceuticals Group, 1997- ; taught pediatrics in the medical schools of Indiana University, 1986-1988; Ohio State University, 1988-1989; and the University of Pennsylvania, 1989-1993.



*Tell us what your title is, and what you are doing.*

It's vice president, Global Outcomes Research, in the Pfizer Pharmaceutical Group. What that means is that I am in charge of the global health economics group within Pfizer. We study drugs, both in development and in the market, to show what their value is and why customers should want to pay for them, in terms of questions like—are they offsetting costs from office visit reductions, hospital stay reductions, improvements in work productivity, and improvements in patients' health-related quality of life? That helps justify some of those efficiency decisions that are ongoing in most of the health-care systems throughout the world.

We participate in three different things. One, we have people who work with our discovery scientists and development scientists. Given what a product might do, we look at what kind of economic value we think some of the decision-makers might place on it, and what we think we need to study to show the economic value. Two, we do studies to document the economic value for products both in development and on the market, whether those are clinical trials or epidemiological studies such as retrospective studies or chart reviews or database analyses or economic models. Then three, we work with customers to help them analyze their own health care information—not just disease-related but also to help their quality improvement efforts, or their own efforts to improve their efficiency in care.

I have a pretty broad variety of people in the group. Then I have a fourth area that is not really

reflected in my title—medical service liaisons and medical and academic partnerships. That's a group of people who are based in the U.S. field. They are medical people—pharmacists, Ph.D's, physicians—and they help headquarters people conduct clinical and health economic research. They help customers with some of their clinical issues, they help disseminate information, etc. They are kind of a new branch in our company, and I have been developing that function. That's what I do.

*You are a mighty busy person.*

Yes, it's been busy. I travel probably thirty percent of the time now, globally and within the U.S. I've got about sixty people reporting to me.

*That's a long way from MIT, that's for sure, in a very extensive way. Tell us a little bit about your family and early education before you came to college.*



Edited and excerpted from an oral history interview conducted by Clarence G. Williams with Lisa C. Egbuonu-Davis in New York City, 24 November 1998.

My father was from Nigeria. That's where the name Egbuonu is from. It means "freedom of speech." He was from the Ibo tribe, a tribe in the southeastern area of Nigeria. They are known for attaining a lot of education. My mother is black American and she grew up on Long Island. I grew up on Long Island as well, and I am the oldest of three girls.

The schools where I went were actually excellent. The Long Island public school system, which we were in at the time, was very good. In elementary school, I skipped grades. I spent a lot of time doing extracurricular activities because I was bored. They skipped me one time and decided not to skip me again, because they thought I was socially disruptive. I could do the work, but I just didn't match. In junior high and high school, I spent a lot of time multi-tasking. I was somebody who would sit there and crochet in class, read *War and Peace*, or whatever. I would spend a certain percentage of my time paying attention. At first the teachers would try to catch me out. Then they just gave up. They let me do whatever I wanted to do, because I would be able to answer the questions and keep doing my other things at the same time. Other people would get mad, and they would say, "How come she can do that?" They would say, "If you can do that and answer the questions, you can do that too."

So I was used to just being unique, although somewhat isolated. There were not a lot of black kids where we grew up. There were some in our neighborhood in a seven-block square, but in the larger school in any given grade, there might be ten or twenty of us—sixty when we were in high school. But in my classes, I tended to be the only one—or one of two—and I was somewhat the computer that people used to try to see if they could win against.

My high school was excellent. They had a lot of advanced placement classes. They had a special math curriculum that actually started in junior high, so I was doing calculus for several years before I left high school.

*Where was that?*

Sewanhaka in Elmont, Long Island. It was kind of a pioneering high school because they had had multi-level types of courses for years. They had a vocational program, a standard program, and a college prep program. They had had that for a number of years. I had excellent math. We did

computers with punch cards. I did COBOL and FORTRAN.

*What year was this?*

I graduated in '75. I had done a lot of things before I left high school. I had advanced placement English, French, history, and all that kind of stuff. It was a very good high school.

*How many students were in your graduating class?*

It was small. I don't remember, I think it was about six hundred.

*Where did you rank?*

Close to the top. I was mad. I was like third because I got a B in gym. The girl who was first hadn't had to take gym because she had a pass/fail. It had been three years before in ninth grade. I was very irritated. Everybody else thought that was entertaining. I didn't even like gym.

But I was bored. I was ready to move out. It was a small-town environment where I was kind of an unusual person. I was ready to move out and go somewhere different.

*How did you come to MIT?*

My father wanted me to go. A post card came in the mail. All these books started coming in the mail, based on SAT scores. My father was the only one for MIT. He said, "We are going to go to MIT." I said, "We are going to go to MIT?" Initially, I fought that a lot because I wanted to go to the University of Chicago. Then I went visiting all of the schools. When I went to the University of Chicago, I actually didn't like it. I decided it wasn't worth fighting for. At the time, it was like an armed camp. People were very frightened about walking to McDonald's. It was more liberal arts, the classics kind of focus, and I was not all that interested.

When I went to MIT, it was also unrepresentative, but there was a party. It was a weekend where everybody was doing nothing but fun. There was a party that weekend. They had a bake sale and all kinds of stuff was going on. I liked the people and I thought it was going to be lots of fun. So I stopped fighting and decided to go to MIT.

*What were your initial impressions of the institution at that time, once you got there and started getting immersed into the system?*

MIT was big and a little bit scary. Of course, all of the people at my high school were telling me, "Well, you know, you're not going to be at the top

of the class anymore.” So it was a little intimidating. I was just trying to figure out where I fit. I spent some time just kind of figuring out what all that meant. I guess I spent most of my energy for the first couple of months trying to get a single room in a dorm. That was my number one objective. That was part of why I lived in McCormick. I went to the all-black floor, which was fun.

So to me, having been in environments where there was no possibility of ever having any all-black anything, I probably had the opposite experience of most people. Our class was one of the smallest classes ever. We were maybe thirty-two black people out of eleven hundred.

*I think there was a reason for that. I think they had just begun to figure out the kind of profile they thought could really accommodate a number of us. When they started in 1969, they brought in larger classes. But obviously they made some mistakes, and we were just trying out. So your class probably was one of the smallest classes that they brought in.*

It was just kind of a big place, and it was scary trying to figure out where I fit. Then the class-work—it was there and it fit. That wasn't that hard for me. That's probably not representative, and that's probably why Reggie Van Lee and I got along. We were two people who said, “This is okay.” Everybody else hated us. They said, “These two people are happy. They're partying and we're struggling.”

*You are two of the few people who have taken the position you have taken. Reggie said the same thing.*

I had a good time. I messed up at the beginning because I dated some guy. There was a blowup and a mess or whatever, the classic kind of freshman stuff that happens socially. But I had a good time because I had a system. I would work early in the morning, from probably five to eight, go to class, take a nap in the afternoon, do some work in the early evening, and then go out and party. It worked.

*How did you decide what field you would go into?*

That was hard. When I started out, I was thinking in terms of engineering—not that I knew what engineering was. Then when I finally got some exposure to machines and engineering, I thought, “Oh, I'm more interested in chemistry.” I had been considering pre-med, but I was kind of resisting it when I came. I actually started out in chemistry

the second year, and I killed myself. I took all of these classes at one time, which my advisor recommended me not to do. I took 5.42, 5.60, and 5.31 all at the same time, and a couple of humanities classes. It was really a bad semester for me. But at the end of it, I got straight A's. I called my mother and she said, “Was it worth it?” And I said, “No.”

*Someone has to really know what that was that you did. About how many credits?*

I don't remember the numbers anymore, but it was a lot. At the end, I thought, “I don't really feel like doing this.” I hated the lab. That's the main reason I switched out of chemistry. I detested the lab with a passion. In fact, I started the second semester—whatever the next course is, 5.32?—and I did it for about three weeks. When the first thing went wrong with the lab experiment, I said, “No, I'm not coming back here.” I walked out and never went back. I said, “Now I am going to do something else, and this is not it.”

I played around a little. I did some volunteer work at Children's Hospital. I think I might have picked up a biology class. I decided that probably I was going to be pre-med. I wanted to do that, even though I wanted to run things and not necessarily see patients full-time. Number two, I thought I'd rather do biology because it was more interesting. The labs were more interesting, more fun, and not as hard—you know, better. I switched to biology mostly because I liked the labs. I actually liked the biology labs because they were more molecular biology-focused. There was the whole genetic component, which actually has turned out to be very relevant to what I do. That's kind of funny, but that's how I got into it.

*You were very much the way you described yourself in high school. Things really came easily for you, and you figured out how it worked best for you. You also took care of the fact that you were bored a lot, because you spent a lot of time doing things outside of class. Could you talk a little bit about some of the things you were involved in at MIT?*

The most surprising thing for me, given my lack of sports history, was that I was a cheerleader the first year. Partially that's because everybody in the suite was a cheerleader. I don't think I ever went to a game in high school, so the fact that I became a cheerleader was really ludicrous. I did that because everybody was doing it, and I wanted to

get over being shy—being in front of people. I clearly did that.

What was good about MIT for me was that people came up to me and said, “You need to do this because we think you can do it.” I think it was Bill Gilchrist who came up to me and said, “We need to train somebody to take over the Black Students’ Union Tutorial Program, and we think you will be a good person. Here, why don’t you start working on the Black Students’ Union Tutorial Program?” So I started doing that.

During the summers, I was usually doing a bunch of different of things. I worked the first year at Draper Laboratory. That was bad. They put me in the front. It was like a classic token job, where they had me substitute for the receptionist and sit in front doing typing.

*So people could see you, right?*

That’s right. And all the guys they hired they gave them technical jobs, however boring they might have been. But they put me out front. I hated it and I said, “I am not doing that again.” I do have a little bit of that *Gone with the Wind* streak. When it’s over the line at a certain point, I say, “I am never doing this again. By whatever means necessary, that’s it.” It’s like the chemistry lab line.

That happened again later, when I was doing pediatric oncology. That’s the most depressing thing on the face of the earth. I said I was never doing it again, and I didn’t. Even though they brought it back into the residency program, I switched the month with somebody else who was doing emergency room. I did eight weeks in a row every other night in the emergency room. So I’ve done that again, when I get to those points.

At MIT, I participated in the Committee on Academic Performance. Later on, I ran the Black Students’ Union Tutorial Program. I pledged AKA. That was the first group, and that was fun. It was a challenge for me because I don’t really like following the rules and conforming is not my strength. I am witnessing that again in another generation in my daughter. This is genetic, the inability to follow rules. Dressing the same, following the rules, and all that stuff isn’t my thing. But I pledged AKA and that was fun. I also did UROP projects. I was at Children’s Hospital doing ultrasounds. I also did a UROP project on failure to thrive in children. I can’t even remember all the things, but I did a lot of things.

*You did. You were all over the place. But whatever you did, you did it exceedingly well. That’s the interesting thing about it. We need to put some of that in a tube and give it to a lot of people.*

I did a lot of things during the course of my career there. I spent a summer in Bell Labs, and that was fun. I spent one summer in a medical pre-med prep class at New York Medical School. I hated it, but it was useful for later. What happened was that I went there and everybody was deadly serious. There were a lot of people who were desperately trying to get into medical school. I didn’t really want to go there anyway, because I really wanted to go to Cornell. But Cornell didn’t like me, either because I was too radical or they decided that I didn’t need the summer to get into medical school, both of which were true. So I went to New York Medical College for a summer. There were a lot of people there really worried about getting into medical school. They were trying to bolster their resumes to do that, whereas my attitude was, “Okay, fine, I’ll spend the summer here.” I didn’t like it because it was too isolated, I didn’t have a car, and it was too far from the bus.

Fairly early on, I had won an award to go to Mexico from the AKA sorority for having the top GPA in the region. The New York Medical College people told me that I couldn’t go because I couldn’t possibly catch up. Well, telling me that I can’t do something is the equivalent of a challenge—“Okay, fine, I am going to do it just to prove that you are wrong.” So I went on my week-long trip, came back, and had a test two days later. In the meantime, I had missed the first test and the second test was going to count double—fine, no problem. So I crammed for a period of time for the test. Of course, I got like the highest grade in the program on the test. I got a 90-something and all these other people had done really badly. I was the most hated person on the campus for the rest of the summer. I would cram, and after I crammed I was fine. I would read trash. They would ask, “Is that how you get good grades, you read trash novels?” I would say, “Yes, it works for me.”

Nobody wanted to talk to me. They hated me, but it was good because I learned from that experience that I needed not to live with other medical students. I didn’t need people comparing how many hours I studied to how many hours they studied. That was not my problem. It was also a good introduction to anatomy, which is one of

the hardest subjects to get into later. It was a good preparation for that. But mostly it was good social preparation to know to stay away from living with other medical students in medical school. It was funny. Then I also finished MIT early.

*Now, that I missed. You finished in three years?*

Three and a half. I graduated in January and they kicked me out of the dorm. That was a big problem because finding housing in Boston was impossible. It was like they invented housing discrimination. I rented an apartment. I didn't know what I was doing. I rented an apartment near Fenway Park. Then I came back to campus and people were asking, "Where is your apartment?" When I said Fenway Park, people looked at me like, "Why are you there? You are in trouble." I didn't know what it was like. I saw something about the KKK in the elevator and there were no other black people. I never saw anybody black. I said, "Uh-oh, this is bad." I didn't stay there. I would sleep in the dorm on friends' floors. Then I rented a room at some old lady's house and I never stayed in there.

I was kind of homeless for the semester, and that was interesting. Then I lived in the East Campus when we had the Interphase summer program.

*Did you make anything other than A's?*

No.

*I keep telling people that you are one of the few people like that, you and Bobby Satcher. I don't know whether you remember him. No. He came after you. You are the only two people I really know like that. I happened to observe grades at that time.*

*What would you say was the worst experience at MIT that you had, and what would you consider the best?*

I'll start with the best. I think the best thing was that I realized I was with some of the smartest people around, I was at their level, and I could play ball with them. That was the best thing coming out of that experience. There were many semesters where I had class highs. Certainly, I have known plenty of people who I thought were incredibly brilliant, but I could play with the big boys. I could play in their league, on their turf, and with their rules. That kind of core confidence was in fact the strongest benefit I got from going to MIT—that and the expectation about access to power. I used

to try to teach that to people, which was interesting. I would say, "This is not about school, this is about access to power." People would look at me and say, "What?"

*You were too advanced.*

I thought that those were some of the best things about MIT. I was never really intimidated by it. People with Nobel prizes taught you physics. Some of them were lousy teachers, but they were people. My sense was, "That's what they are like, there are people who are smarter than me and people who are not, but I can play in their league." That was the strongest thing and the best thing about the experience. I also had some really good relationships with the black community, which was good because it was the first time I had a peer group. I had never had a peer group in high school, really.

Some of the worst things were, I think, some of the stupid debates about the assumption of inferiority that would happen at the polls, where people would write anything up there and have those stupid debates about Confederate flags and how dare they let these people in because they can't possibly compete kind of stuff. Those were some of the things that were the worst.

There's one thing that stuck in my mind the most, more because it made me angrier than just about any of my other experiences over four years. There was a guy—about six-foot-two with red hair, I can't remember his name—who I had seen throughout my three and a half years in biology. He never spoke to me and I never spoke to him, and it didn't matter. But he came up to me after the MCAT's in Building 10, or one of those. Anyway, he said to me, "Did you check off the box? I said, "What box, and who are you anyway?" And he said, "Did you check off the box for special treatment because you are black?" I was looking at him thinking, "You have the nerve to talk to me after four years. I know I have beaten you because I have gotten A's all the time, and I have gotten class highs every semester. And you dare talk to me about special treatment?" I just said to him, "How dare you come up to me? You sit there and you've got every privilege from this society. You act as if it is your birthright and you have had it forever. This society will always give you an advantage and you have the nerve to ask me, in this instance, where I might have an advantage

over you and whether I checked the box? Yes, I checked the box, and anyway, it doesn't matter because I am smarter than you."

He was so frightened and it was so funny. Here I am like a foot shorter, fifty pounds lighter, and I could see him thinking, "Uh-oh, I'm going to get beaten up by this woman."—"Yeah, you're right." It was so funny, and I will never forget that. That was very interesting. That was one of the worst experiences.

*Say a little more about role models and mentors going back as far as you want up to now. Who were the memorable role models and mentors in your studies and subsequent career?*

The Nigerians never had a sense of inferiority. Ibos knew that they were better than everybody else anyway. There were physicians and other kinds of scientists and people who were coming over. So there was just an expectation that you were supposed to be good. That counterweighed the African-Americans' sense, "Oh, we don't know if we are as good," or "You're not supposed to act black," or whatever. That kind of Nigerian sense of "who I am" outweighed those negative messages.

In high school, I really didn't have role models. I had teachers I got along with, and I got along with them better than I did with my peers. I had some science teachers whom I would have political debates with, and they were at least fifteen years older and white. There was one black science teacher. I would have debates with the English teacher, but I was trying to find some commonality.

*It must have been hard to match your ability.*

Then at MIT, I think some of the people I looked up to were Lynne Richardson, who was a couple of years ahead, and Jennie Patrick, with her Ph.D. in chemical engineering. There were others. There was Wes Harris and then, of course, Dean Mary Hope—Dean Hope, in particular, because she was the practical down-to-earth type, "This is what you need to do to survive." I really counted on those people.

Then I had some career assistance from people who were not black, like Carola Eisenberg—although she will never forgive me for not going to Harvard Medical School and going to Hopkins instead. Constantine Simonides was funny, and I had a good relationship with him. Wes was really a strong figure, and it was really good working in the Office of Minority Education with him. I guess I

got different things from people. I got things from Wes about how you could deal with this institution, what choices you had, and where you weren't going to be able to make a dent in any way, and from Carola about what options I had and that kind of thing.

Then later on, one of the stronger people after MIT was Levi Watkins, the only black physician—as far as I know—who had ever gotten through the Johns Hopkins cardiac surgery pyramid. He finished, I think, in 1978. When he finished, he stayed on the faculty and he recruited. He was the one who recruited me and a number of my classmates to Hopkins. He basically changed the face of Hopkins, because they were down to like two or three blacks per class. In my class, he recruited thirteen or fourteen, and then after that we recruited the other classes. They increased the numbers and that had a ripple effect ultimately on residency and faculty positions as well.

*You could have gone to pretty much any medical school that you wanted to go to.*

Yes.

*But you chose Johns Hopkins.*

Because of Levi Watkins. I wasn't even going to apply. That was the one school where they said, "Who cares what you got on pass/fail? Nobody ever asks for your grades except for Hopkins and nobody black ever goes to Hopkins." That was basically the line. But I got this letter after the MCAT's from this guy, saying, "I'm trying to change the face of Hopkins and trying to interest minority physicians, so please call me collect." I thought, "This guy is crazy." I called him collect just to see what he had to say. Then he said, "Well, it's only thirty dollars just to come down and see Baltimore." I said, "Okay, fine." I was going to New York that weekend anyway.

So I went on the train to Baltimore and he spent the whole weekend with me. He threw a party and introduced me to this guy who I wound up dating for a couple of years. He showed me the little old ladies and they said, "Oh, you have to come." Then he said, "I'm going to recruit the whole class." It was really his single-handed effort that recruited that class. He was serious, and that's one of the reasons I went to Hopkins instead of Harvard. The other reason was that I wanted a joint MD/MPH degree, and I could do that in four years at Hopkins.

Besides, I was thinking Boston was a horrible environment. I forgot about that part. It was horrible, between John Mack getting beat up—I'll never forget that—and people trying to speed up and hit you on corners, and being afraid to get off the subway in different places. I said to myself, "I'm tired of this, I don't need this." And Baltimore is black, really black. They kept saying, "We're going to build up the inner harbor." The inner harbor wasn't built then, and it was a mess.

*One thing that would be very good is if you could tell us a little bit about some of the things that you have done since you left MIT, and some of the things that you believe the MIT environment assisted you in doing.*

I went to medical school and public health school at Johns Hopkins, and graduated from there in four years. Certainly, all the technical preparation and just the kind of psychological toughness of having been to MIT were very helpful for that. It was also somewhat helpful for residency. I did my pediatric residency at Children's Hospital in Philadelphia, which is probably the hardest thing that I have ever done—not intellectually, but physically because I really hate being sleep-deprived. That has a whole psychological kind of effect. I hate being sleep-deprived. That was probably the hardest thing I have ever done.

Then I had a Robert Wood Johnson clinical fellowship at Penn and got my MBA from Wharton. There, some of the quantitative skills I had gotten at MIT were very useful. Wharton was basically a breeze. It was like a reward for having gone through residency, because I was getting paid to go to school. I learned a lot about health care management with that degree, and I learned more about the business world. There are a lot of physicians at Wharton.

*Did you have a game plan by doing those degrees?*

Yes. I knew that I wanted to run something big in health care. That was my goal. With the MD/MPH, I was thinking about public health. I focused more on research-oriented topics for the master's in public health, epidemiology and that kind of thing. The pediatrics was because in order to run something big, you needed a primary care specialty. I like kids, so I did pediatrics. The MBA was because I wanted to get back into the arena of health service research and management. The Robert Wood Johnson Medical Scholars Program let me do that. I focused on management with that

degree. I consulted to the State of New Jersey Health Department—as usual, doing three things at one time—and helped set up a maternal health program. I was also moonlighting in pediatrics.

That was fun, and I learned a lot about health care policy. Then I took a job running a handicapped children's program for the state of Ohio. That was a good job, except that I got married about six months later. My husband was living in Indiana, and I looked at jobs in Indiana. I got a call from a friend who was at Lilly, and that's when I moved over to the pharmaceutical industry. I have been in the industry for the last ten years, in the health economics group. It uses the research methodologies of public health resources. I have been zigging and zagging my way up through the structures to try to run something big, which is not their game plan for physicians. It's their game plan for marketers who go through a certain path, which I don't fit and which I don't have the time to go through. I've been doing a variety of different things to leverage my skills and to use them to move upward in the path of managing different things in the pharmaceutical industry.

Lederle recruited me after Lilly to be the vice president of public and government affairs, which was a rapid way to jump-start the management kind of responsibility. They were using my pediatrics and public health background because they had vaccines. Actually, before that company was purchased, I saw that it was going to happen, so I had my job lined up with Pfizer. I came here and managed first the U.S. Health Economic Group and then the Global Group, when it got expanded. Now I've been building up the medical service liaisons. My game plan has been to extend my reach into the business, to contribute to running parts of the business, even though I am not a line management person and I am not a marketer.

The ability to get around obstacles has been a good thing for me, and the ability to function in an all-white male institution. I said that once at a dinner, when I had had too many glasses of wine. They were asking me my comments about some diversity issue, whatever. I just said, "You know, if this is just another white male institution, that's what I do. I do white male institutions—MIT, Hopkins, Wharton. That's what they are, you know—and so are Lilly, Pfizer, and the whole thing." So the ability to navigate, establish credibility, understand the power structure, try to develop

some alliances with the power structure, and get what I want either with the help of or in spite of the power structure, it's all the same thing.

*You have been doing that since you were in high school. I wasn't too good at it in high school, but I was trying.*

*You understand it exceedingly well. Is that a Nigerian trait or is that something you acquired? Where did that come from?*

I think it's both. It's a Nigerian trait, because what they say about the Ibo in the proverb is that they will come to clean your house and then they will own it in thirty years. That's the proverb, so some of that's that. Some of that is on my mother's side, because my mother was pretty comfortable challenging authority and rules in life. She was a classical flutist and she played with orchestras. She used to play at the Marlboro Festival and with all these major symphony orchestras. She played with those people when she was younger. Some of it's that, and some of it is just kind of trial-and-error learning and getting tired of losing.

I think earlier on I was a lot more abrasive and I was a lot more confrontational. I had more confrontations with people when I didn't know who they were. The last time I did that, I think, was when I told off the president of Hopkins at some dinner. It was a student dinner. I don't know how we got on the subject, but we started talking about the Hela cells and how they abused black people anyway, and on and on and on. Everybody else was getting quieter and quieter. It was one of my black classmates and I at Hopkins. He said, "Do you know who that is?" I said, "No." So after that I was more careful about who I told off. At least I make sure to know who I am telling off. I think I got better at that over time.

*Based on your own experience, is there any advice that you might offer to other black students entering MIT?*

Yes. I was saying this at my Jack-and-Jill meeting because there are a couple of women whose kids are thinking about it. I think it is really a great place for kids who are excellent in math and science, and who have a reasonably good sense of themselves so that they can take the hits and bounce back. That's number one, assess that that's what they are.

Then given that, the same thing I used to say in the Office of Minority Education and the BSU

Tutorial Program, when they get there they need an environment that fits. They need to find a group. I don't care what the group is. They have to find a group that they can work with, because the basic way the structure is designed is for you to get through it with a group of people. Whatever you have in common with them is relevant, but you have to work with that group of people with the expectation that that's what it takes to survive. That's hard for the kids who are in math and science because they tend to be individualistic. They have to realize that accepting help is not stupid, it's smart. I was smart and I knew who could tell me how to solve problems. That was the fastest way to get it done. I didn't want to be bothered, and that was the fastest way to learn it. But that's something that's hard for kids to accept who are very talented. That's my primary advice.

*Well, is there any other topic that comes to mind as you reflect on your own experience and on the experience of other blacks at MIT?*

There was one frustration and this still has not changed. As far as I can tell, the numbers in the graduate program are just as bad as they were twenty years ago. When I was on the visiting biology committee, they kept saying they couldn't find anybody. They can find people, but they are not going to find them where they are looking. They are saying, "All the blacks want to go get MD's and not Ph.D's." My answer is, "Fine. You let them get their MD's, then you go back to the medical schools and get people who have finished medical school to go back and get Ph.D's. They feel financially that they have another option and they may be more willing to do it, especially if you subsidize their education and training or post-docs. That's the way to get them into a lot of these basic biological sciences." But people don't want to hear that for some reason. I don't know why they can't do that. That is my main frustration with them.

The only other thing is the pipeline. Public education is going down the tubes. The pipeline for undergraduate kids has to be drying up considerably. Unless there is a major social force to counteract that, backed up by some of the business people, it's a total disaster.

Yesterday was really interesting because I was interviewed by Texas Instruments for a board position. I'm kind of junior for that. I asked him what his biggest challenge was, and he said his biggest



challenge was finding and maintaining good technical talent. He said that in terms of getting electrical engineers to design his programs, there was a shortage of American technical talent. So what they are doing is building up more shops in different countries, whether it's India or whatever. The problem with that is a) the distance, and b) sometimes they will bring people over here, but as soon as the economic conditions improve in their homes, they are going home. He said that he really was frustrated with the lack of progress in terms of early education. Fifth-graders are getting turned off to math and science, and have already been convinced that they can't do it. So the whole pipeline is drying up.

That was fascinating to me, that that was his issue. I guess my question or challenge back is, what is the institution doing to impact that?