INTERVIEW WITH
JOHN REED
Sloan Oral History Project
JULY 16, 2013

J: John Reed
B: Bob McKersie
G: George Roth
A: Alan White

G: I am George Roth. I'm a PhD student from MIT in 1993 in Organizational Studies. I have been involved in studying change and lean production systems and organizational systems. As research staff I'm primarily helping these guys out. I'm teaching at the University of NH these days, but Alan and Bob started an effort back in 2010, which really began with Eli Shapiro and meetings over at the Harvard Club, just talking about old times. They started recording them, and we started an oral history project to capture the history of the development of the Sloan School. It includes 35 interviews with faculty and some senior staff who really have looked back – the earliest of which included Eli Shapiro.

In the course of doing that, we have woven ourselves into helping with the 100th anniversary of Course 15, which is primarily why we're here. It started in 1914 and so 2014 is the 100th anniversary. There's a book that's being worked on for that, as well as a number of other activities. We've interviewed some other people associated with that, including Nitin Nohria at the Harvard Business School, who is an alumni and now Dean there. We asked about his views and experiences.

These interviews are really asking about the impact on their careers of the Sloan education they received. We were hoping—he didn't quite say it—that everything Nitin learned and has used at Harvard Business School, he learned at MIT and the Sloan School.

J: Since you're taping this I won't comment.

G: He was very reflective about some issues with management education, which was really good to hear. My role in this project began when Alan moved to Hawaii for a period, and I partnered with Bob to support him in this project. I've been here since 1987 and have an interest in the history. Actually, I came here as a high school student using the computer labs on

Saturdays back in probably 1972-73. So because organizational studies is my field, it's my pleasure to participate in this project.

I will follow up with you on some of the mechanics. We'll ask for approval for a quote. But what we'd like to do, also, with the transcript as a whole, is include it in our oral history archives. If you would like, I can follow up with your assistant.

J: Yes, I'm happy to do it. I would rather target the oral history and then if some portion of that turns out to be useful for your anniversary thing, fine. But if I'm aiming at the oral history, I'm not marketing. If you try to produce a celebratory volume, you're sort of in marketing mode. I'd rather be part of an oral history and then whether that fits or could be used or not is up to you all. I'm happy to do it.

G: I think that's the context in which we were coming here as well. That's essentially what we did with Nitin Nohria as well. We prioritized seeing you because of the book project, but it's opportune because you've actually been on our list for a couple years for the oral history project.

J: I'm more easily accessible since I'm here all the time.

A: The book is not so much a history as we're trying very much to focus on the impact of various fields. There is some history at the beginning, tracing the School from 1914 and before. But we're taking areas like economics and finance and saying, "OK, what has been the impact of that field of study at the school?"

Then we're talking to some alums in the school, asking that same question. "What was the impact of the school on you and your career, and how have you looked at that impact today?" So those are the kinds of things we're trying to draw out.

J: Good. How do you want to proceed? Do you have questions?

B: I'm going to start with the questions. Let me say a little bit about myself. I've been at MIT since 1980 and before I forget, I'm a close colleague of Tom Kochan, whom you

know. He did this course for undergraduates, and at the end of the course just a month or two ago, they used the format of The Tech and summarized all their reports in courses. So here's Tom, and Tom's grandchildren, and so on. Tom said he meant to send this to you and that you know something about that undergraduate minor, which you had some role in helping get started.

I retired about 15 years ago, but I continue to teach. I teach the Choice Points course for the Sloan Fellows every spring and continue to do research and work closely with colleagues in our group and for the Institute for Work and Employment Relations. My field is negotiations and industrial relations.

I'd like to start at the beginning. What prompted you to come to MIT as an undergraduate?

J: It was pretty straightforward. My dad had graduated from MIT. I was living in Argentina, had lived there throughout my education prior to college. In those days, I didn't know very much about college. Dad had gone to MIT, and he always said, "You should study engineering – not to pursue it necessarily as a career, but just as an intellectual discipline." I was of the generation where one listened to one's parents, so I said, "Let's go to MIT." I was in Argentina, I'd never lived in the US, so the result was that the transition was not going to be easy. I applied to the 3-2 program. At the time there was a lot of feeling that engineers did not study liberal arts and that they needed them in order to be more effective in the world. MIT responded to that by having the 3-2 program with a defined list of schools; I believe there were 12. For those who were inclined that way, you could apply for a 3-2 program and you went to the liberal arts school for three years, then you came here to MIT basically as a junior, and at the end of the five years you received both a Bachelor of Arts and a Bachelor of Science. That's what I did, again following my dad's suggestion, because he said, "You're going to be able to get into the rhythm of an American life much more easily if you start in that fashion." He tried to convince me to take an extra senior year in a prep school as a bridge, but you could imagine that didn't sell very well. So instead of doing that, I did the 3-2 and it worked out very well for me.

I went to a small school outside of Pittsburgh, PA called Washington & Jefferson College, an all-boys school at the time, 600 people. I selected it from the list of MIT-related schools without any knowledge. It worked out very well for me because it was a good introduction to the US and to a very different world than the one in which I had lived. A lot of

the kids at W&J were coal-miners' kids. My best friend's father ran tugboats on the Ohio River. So this was a very different world than the one I had grown up in in Argentina.

From there I came here to MIT. At the time, the Sloan Program required that you have an engineering minor; in fact, the minor was such that it wasn't until you decided where to write your thesis that it became whether you were in Course 15 or something else. I chose, quite arbitrarily, Course 3, which at the time was metallurgy. It wasn't as sophisticated as materials science. I took all my technical work in Course 3 and took some of the management programs.

I can still remember where I was standing there in the Infinite Corridor when I decided whether to major in Course 3 or 15. I decided on Course 15, and it turned out to be a good decision, for good reasons. I said I'd be an oaky metallurgist and maybe a more effective manager. My objective overall was to manage. If you had asked me at age 12 what I wanted to do, I would have said I wanted to be a factory manager. That's what I thought was the ultimate thing that one could be in the world. I always had that interest in management. So that's how I came to MIT as an undergraduate, and it worked extremely well for me. The three years of liberal arts were extremely useful, particularly as a way of becoming comfortable in the US. People who have been raised here don't realize how different this country is.

One thing that happened when I came to MIT, I felt that step function of difference of level of intellectual activity. You learned that not so much from the professors (you couldn't tell it), but from the other kids in the class. I can remember struggling in thermodynamics and saying, "God, I didn't realize how dumb I really am." Physical chemistry and some other courses were similar. I felt the difference in the level of intellectual intensity. It made a meaningful change in my life. It caused me to rise up to a different level of thinking and capability. So it really was well worthwhile.

When I graduated from school here, I applied for jobs, again following my instinct in manufacturing, thinking I'd become a plant manager. I chose to take a job—these were days when jobs were plentiful so you did choose which job to take—at Goodyear. I was an international production trainee in plant one in Akron, Ohio.

B: What year was that?

J: 1961. I didn't stay around to get my degree because my father sent me a very nice note from Argentina saying, "Congratulations. Please remit any money left in your checking account." I think he would have waited a week for me, but I didn't wait. I had to get to work in order to get some money. I didn't have a lot of money to eat that first week. Goodyear paid at the end of the week. I went to work for Goodyear in a production job.

I had taken ROTC in school and the Army picked me up on March 1st, so I only worked from June to March. Then I spent two years in the Corps of Engineers, but again from a managerial point of view. You're a lieutenant, you learn a lot about management. I spent the bulk of the time in Korea, in the Third Echelon maintenance depot. I had 55 GIs and a couple of sergeants, but more importantly I probably had 200 Koreans working in the unit for which I was responsible. Again, managerial things, and I learned a lot about what I didn't know.

One of the people with whom I worked at Goodyear had gone to the Harvard Business School, and it was clear that he knew a lot that I didn't know anything about. We became good friends, but I could see that he was tracking at a different pace than I was. So when I was in Korea, I said, "I'd better go back to grad school and pick up some things that I'd like to understand."

I looked at Harvard. They were a horrible bureaucracy. I was going to get out of the Army on the last day of February, they wanted me to wait until September. They wanted me to take all the standard courses. I came here and talked to Bill Pounds, who was Dean at the time, and we negotiated a process by which I could take what I wanted to take and get a degree from MIT.

A: Was that common at that time, John, to have that kind of open process to negotiate the degree?

J: I don't think so. I think it was very MIT-ish. I suspect I was peculiar because I had a clear idea in my mind what it was I didn't know that I wanted to learn. Obviously, Bill pushed that idea around a little bit. It wasn't as if I was that knowledgeable. But I thought I was. I think MIT has always been a school where people can tailor their learning experiences. And Harvard Business School was clearly not such a school.

B: Let me back up to the two things you did after your undergraduate training -- Goodyear and then the Army experience. What aspects of your education here did you think really worked, really helped as you moved into plant management first at Goodyear, and then into the Army experience.

J: The thing that really helped is you know how to deal with problems. One of the things in Goodyear, we were building tires for the B-58 bomber, and the Pentagon negotiated landings. They didn't care how many tires we sold them, they said, "We want a certain number of landings." 1,000 or 10,000 or whatever it was. If you had to have one set of tires per landing, that was your problem. Or, you could build a set of tires that would last for all those 1,000 landings… So quality became a big deal at Goodyear.

One of the quality problems we had in the tires was traced back to the separation of fibers. You put a piece of material between two pieces of rubber and laminate the rubber on top of the material in what was called a Z calendar. You have rubber coming from top and bottom and fabric in the middle and you're squeezing it on. We traced back that it had to do with the two pieces of material sitting next to each other with no rubber between, and hence they could split because there was nothing keeping the two strands of fabric together. I spent a lot of time trying to figure out how to make sure that you didn't have two strands of fabric together. I confronted problems, I wasn't scared of dealing with problems. I wasn't scared to experiment. I think I destroyed a couple miles of fabric in the process and that came from the self-assurance that you get at MIT in terms of attacking problems.

The other thing is I had matured as a worker to the point where I could deal comfortably with people who were 10 to 15 years my senior. I didn't socialize with them. I never would have said, "Hey, let's go out to dinner." I knew damn well I was a trainee, but when I was in the office, I was quite comfortable with dealing with whatever problems we had. That came from the maturing you get here at the Institute. Had I finished W&J, done four years, got a Bachelor of Arts, I would not have picked up that ability.

B: Are there some professors or courses or faculty within Course 15 that stand out?

J: No. There was no one at MIT that knew I was here. I sat in the back of the class. It's funny. I had to write a thesis, which in those days you did as an undergraduate. I remember my thesis advisor realizing for the first time that maybe I was interesting. But until he read my thesis, I was just an invisible member of the school.

Clearly there were professors—there was a Professor Cohen in Course 3 who stood out as a great lecturer, but I was too scared to say more than "good morning" or "good afternoon" to him. I never would have approached him to talk to him. I wasn't one of these people who had a wonderful relationship with some professor.

G: The problem you solved at Goodyear, which you characterized as a materials problem, it also would be a process problem to ensure quality in operations.

J: Yes, the real question was how you could do that… No one had any problem building these tires in a lab. The question was could we build hundreds and thousands of them.

G: I believe, because other people have talked about it, that the basement of E-52 had a production lab that looked at a lot of people process problems. Was that something you were exposed to?

J: I don't think it was there when I was there. I can remember being in the basement. They had an IBM 600 or something like that for the graduate school. If was used by a lot of economists speculating on pork bellies.

G: I was going to ask what stood out for you? What kind of courses did you want to take, and what did Bill maybe suggest you might also want to consider?

J: The thing I was most interested in was analytically intense courses. You could learn a lot just reading. It's very difficult to learn the more mathematically intense courses. I ended up taking the core courses in Course 14. In those days, Samuelson, Solow, Domar, and Bishop.

I took those four courses: I took math for economists. I took money from Modigliani. I took a lot of Course 14, which had the analytical rigor I was looking for. Then I took some production courses as they existed, and there were some pretty good ones. They talked about T groups. You're asking me to remember 60 years ago! There were some interpersonal courses, I don't know what the courses were, but they had to do with inter-human interactions in managerial situations. And there was a course in negotiation and unions. Of course Goodyear was unionized. I was in the union when I was on the production floor.

B: That could have been Charlie Meyers or Doug Brown, one of those.

J: Yes. We did get into unions, particularly as you're going to be in the production business. They were very much a reality in those days. One of the things that Bill made me do was to take a reading course with a professor who guided me into reading various literature that they thought I should read. It was just a conversation, of course, in the sense that I was given things to read, and then I'd come to talk to the professor, sort of a British tutorial style. I don't know why Bill thought I needed that but he did.

I took a course from a visiting professor, which made a big influence on me. It was a precursor for all this math and finance. It was a course on bonds, and I learned how to read a prospectus. We learned how to look at the *Wall Street Journal* and see which investment banks were at what tier. It was that sort of basics. That turned out to be quite useful. It was very much a precursor for what today has become the mathematics of finance, which personally I think is a little exaggerated.

The other thing is what's happened to finance—and this is unrelated to MIT. During the time I was in the business, we were traditional in the sense that we were lending money to people in industry and trade, etc. The industry has switched, and now they're producing product for investment. That's a different business. That's why they package mortgages. We were quite happy to lend to people who wanted to buy a house. The idea of packaging mortgages doesn't do anything for the person who has bought the house. To some extent it hurts them because if they want to renegotiate they can't find out who owns the mortgage. But the idea of packaging and selling was the beginning of this transformation of the industry that is now very much focused on creating product for investors, and very less focused

on making capital available. The people who are actually making capital available deal with unrated companies. So the industry changed dramatically. And all this mathematics is useful for investors but it's not particularly relevant to people who want to borrow money.

A: When you went back out to industry, you went into the bank. Initially, did you work more with the operations management materials than you did the other areas?

J: Yes. I presented myself as a manager. From my point of view—and this speaks to organizational issues—a manager is somebody who gets things done through people and organization and processes. When I was looking for a job, there were two jobs that were most attractive to me. One was Exxon, in those days Standard Oil of New Jersey, and the other was at Citi. I wasn't industry specific. What I was looking for was an environment that would be challenging and global. Clearly, because of my international background, I'd been in Argentina and Brazil, and I served in the Army in Korea, I was comfortable in the world. I thought I would probably like to live overseas most of my life, so I looked at those two companies.

Turned out I went to Citi. Because of the way I applied for my job, I went in as a trainee, but I was one of two trainees who worked a sort of executive assistant to the head of the international division. The head of the international division at Citi in those days had a habit, just for his convenience, of selecting two trainees out of each class, using them as assistants, and then throwing them back into the pool. I became one of those two and my boss was Walt Wriston, who at the time was running the international division. I very quickly started making sense of the numbers.

You can't conceive of what large companies were like back in 1965. We had no budget. We didn't have the slightest idea what our earnings were until after they were published. Wriston, who was running the overseas division and who was competing to eventually run the bank, he'd find out what the earnings of his division were from the chairman. The chairman would say, "Walt, you had a good month this month, you earned XYZ." That was the first time he knew it. Needless to say, he would have preferred to know first, particularly if the earnings were different than he might have expected – not only to know, but be able to explain why.

It didn't take me long to figure that out. I got to know all the people in Accounting. I wandered around and pretty soon I'd go to Walt prior to the board meeting at the

end of the month and say, “Walt, I think we earned about X this month and Brazil is up and Germany was down.” Walt liked that. It was the first time somebody had been able to give him all these numbers. It was a mess.

It took me four years to figure out MIT’s finances. That’s a little bit for the same reason that no one understood them in Citi. It was too confusing. There were a lot of arbitrary adjustments and different forms of earnings. You could choose your flavor. There were local earnings; there were remitted earnings, which meant the earnings that actually had been sent back to head office and hence available for dividends. Just like MIT, we have the CIB but it doesn’t add up to anything but is used by the Provost to talk with department heads.

Anyway, I figured that out, and Walt liked it. When he became president, he took me upstairs with him and said, “I want you to create an accounting system for the bank, just as you did for the overseas division.” So I spent a couple years creating what I think of as the language of management. How are we going to run this place? We weren’t worried about financial accounting. What we were worried about is: how do you distinguish the performance of Paraguay from that of Germany? Two very different markets. Obviously, Germany is going to earn more money than Paraguay. That doesn’t necessarily mean the manager in Germany is better than the manager in Paraguay.

We created a budget, which we never had had before. People would talk about what they hoped they might be able to do over a period of time. Budgets are just designed to have certain kinds of conversations and hopefully to allow you to deal with problems prior to their actually occurring. We created all of that. So it was my analytical capability...something tracing back to Sloan.

By the way, I had written my undergraduate thesis on management accounting in a green sand foundry here in the outskirts of Boston, in Braintree. I don’t even know if it exists any longer. But I got into accounting as an undergraduate. One of the projects I did, which made a big impact on my thinking, was NEPCO, the New England Packing Company. I went to them and said, “I’m an undergraduate at MIT. I’d like to ask you some questions.” The owner was happy to spend some time with me.

I said, “How do you make money?”

He said, “John, it’s really very simple. I know what my conversion costs are. I have them in my head. I get up in the morning, and I have an idea of what I could sell hamburger

for or hotdog for," or whatever the other product lines he had. "I go to the market and I look at the ingredients and I have the conversion costs in my brain. Some days we make money from hotdogs and some days we make money from hamburgers, it varies."

That was the first time I understood how you have a set of fixed costs that you look at the variable costs of your ingredients, conversion costs, and you're not necessarily going to make money from the same product every day of the week. You're going to make it depending on what the price of the raw materials are. This guy was smart and made a lot of money. They didn't always make it every day. He knew he had to make hotdogs. Some days he'd make hotdogs and lose money on them, but he made it up on the hamburger. I was very impressed by that experience.

A: You call the approach that you brought to the organizational settings "problem solving," which you learned at MIT, your basic approach.

J: You had self-confidence.

A: Some people would look at this and say, "Yes, but you're a very creative person. You were creating things that didn't exist." So where does that come from? That's slightly different. Was there anything at MIT?

J: My dad talked about his business at the dinner table so I had some sense of what business was like. I don't think any of us know how to teach creativity. MIT allows it to flourish. MIT lets you walk out to NEPCO and ask questions to somebody. I don't know how I got into this green sand foundry in Braintree, but I got there and I must have gone there twice a week for a semester or two semesters. It was all cost accounting. There are real problems of how you allocate costs when you have central costs and you've got to allocate to the various things you ~~do~~ make. I got involved in that and for some reason I understood this language of management. I didn't see it from an accounting point of view, although I now know what the cost of a particular piece of artwork is. It was more the dynamic of being able to talk to the production people about their costs.

I've always said, "Remember, numbers are adjectives, they're not verbs." You can say, as we do, that it costs us $80,000/year to educate an undergraduate here. That's more or less the case. What's important is how it's changed over time. But I wouldn't argue with you about 65 versus 80 or 80 versus 90. These aren't precise. We're not scientists measuring things that actually can be measured. You're describing things with numbers.

The accounting problems at the bank, which first got me launched, seemed pretty obvious. You wanted to know how you'd done and since you knew at the end of the month, you must somehow have had the components around. So I just went down the chain and said, "Hey, where are these numbers coming from?" There's a report called the BB-34 that came in from every branch, every month. Where did the BB-34 go? A guy by the name of Wally Sanjack got it. Wally and I became good friends, so I'd go down and look at the BB-34s. Then I discovered what kinds of adjustments were made to them in the head office in order to produce the numbers. Pretty soon I had a piece of paper that could trace how the numbers came together. I showed it to Walt, and Walt was astounded because no one had ever looked.

By the way, the comptroller of the bank was Bernie Stott who was an MIT graduate of Course 6. He was comptroller of the bank when I was there, comptroller being at the time the chief financial accountant. He was very conservative. He threw me out of the bank one day because he caught me without a jacket on. I was going to the men's room in a shirtsleeve. The elevator door opened and there was Bernie. He said, "Reed, what are you doing without your coat on?"

I said, "I'm going to the bathroom, sir."

He said, "Go home." Doors closed, he went upstairs and I went home.

B: You chose banking when you had a chance to work for Exxon. Previously you worked for Goodyear. You'd been in the Army where there were tangible things. Banking is very different than manufacturing and it also has this culture, which you've just alluded to. Did you ever have second thoughts about having gone into banking rather than manufacturing where you could see things?

J: No, no. By the way, I never really was a banker.

B: You weren't a banker's banker.

J: No and when it came time to choose the CEO, I'm sure one of the discussions that people must have had at the board level, I obviously don't know, is, "Hey, this guy has never dealt with a customer or negotiated a loan or had to recover a bad loan." I'd never done any of those things. I worked as an assistant to Wriston, got involved in accounting, budgeting, and planning, none of which existed before.

We created a language to plan and to think about things. If only the First National Bank of Boston had realized that when there was a devaluation in the foreign country and the dollar value of your capital in that country was reduced by virtue of the devaluation, that you had not in fact lost any economic value. Even though the accounting value would appear to have been diminished, the economic stream of future earnings was unchanged. Unlike First of Boston, we were willing to expand into markets where there would be devaluations because after WW II, the dollar was relatively strong. First of Boston failed to expand internationally because they were convinced that these devaluations were true losses and they were losing their capital. It was too bad, because the First of Boston could have been what Citi became, the global bank. They were early in Latin America. We were earlier around the world, but they were early in Latin America. I can remember talking to the chairman of First of Boston about this but couldn't convince him.

Next, I was asked by Wriston to introduce computers into the banking world. I won't bore you with the long stories, but I spent a good bit of time on this. Again, I knew nothing about computers. I had written a few programs in FORTRAN and that was about it. But, as I did then and I did it many times during my career, I found somebody who knew something about computers. I had a professor from MIT come here and give little seminars at the bank once a week for a period on the structure of computers. Not only did I learn, but so did some of my colleagues. Then I went out into the industry and got to understand it sufficiently so that I could suggest how we would most effectively intersect with it. That worked out well.

Then I got involved in starting a consumer business. It was just a question of putting together things that already existed within the company, which were oriented toward solving financial problems for individuals. That ended up representing 40-50% of our earnings, and it was because of that that I became chairman. They said, "Reed knows how to build a

business, to grow a business." Which was true. I did. Then they made me chairman, for which I was probably less qualified and certainly had less fun than I had while I was building the business. As chairman you have to cope with what's happening.

G: You are credited with, I don't know if we'd say inventing, but certainly popularizing ATM.

J: Yes, that was a visible but a small part of our work. The point is everybody knows what an ATM is. You see them all over the place. We also brought computers into the back office. No one sees those. We did a lot of money transfer stuff for corporations using terminals and corporate treasurer's offices that again are invisible. The ATM was just a physical manifestation of our work. From a technical point of view, very complex because at the time the technology was very, very slow. You're going to distribute something that's going to hand out cash, it has to be a pretty robust system. You can't not know to whom you gave the money, so you've got to have all sorts of backups. We're using 3-400 baud lines. 1200 baud was unthought of as a speed for communication. You had to write all your code in machine language. We had to build our own computers and concentrators. I went to IBM, and they said, "We have no interest. We don't care what you guys want, this is what we're selling." John Opal, I can still remember, he said, "John, we can't build for your needs. Here's our product line."

The world has changed a lot. I got engaged in these changes and everybody says, "Oh the ATMs and credit cards which I did have a lot to do with." But that was a subset of the consumer business. What we were trying to do is solve the financial needs of the consumer. One of the financial needs was cash. It became abundantly clear that opening branches during hours that were convenient to us, which is basically what banks did, wasn't a great way to provide your customers with cash. So we made a 24/7 promise that Citi never sleeps. You're going to have your money. And we picked up market share like mad.

A: Would you say a few words about the opportunities you see for Sloan going forward and its impact at MIT?

J: I'm not wild about the path that Sloan is currently on. I'm sure I'm a minority. I think Sloan was created with the idea that people trained in engineering would end up in managerial positions throughout industry. We wanted to provide management education to those people. We've strayed a lot from that. I'd love to pick up the paper and find that the person running the Boeing 787 program was a Sloan graduate, but he isn't. I'd love to think that the person who wrote Windows 8 or whatever at Microsoft was a Sloan graduate. In other words, managing big engineering projects. Or that the head of research for Merck is a Sloan graduate. Someone who studied biology as an undergraduate but then developed some managerial capabilities. In other words, I would love to see a greater connection between managerial skills and the typical MIT graduate. Might not even be bad to teach a few architects something about management. I've hired a lot of architects and they could use a little management. But we've moved in the direction of being a generalized MBA, and I'm less happy about that. When I first joined the Corporation here at MIT, we had a people from Kodak, Dupont, Boeing.

G: What year was that?

J: Probably the 1970s. I've never really looked. They were all MIT grads. I took the Fortune 500, I added private companies who might be part of the Fortune 500 were they not private. I got up to about 512 companies. I looked at the CEOs. 135 out of the 512 CEOs had a STEM degree. Only 10 went to MIT. Now, if you'd done that in the 1970s, if there had been 135, 40 would have gone to MIT. I don't think we are any longer teaching management to people who are going to out into corporate America. Maybe we're teaching management to startup, Dropbox, or what have you. But they're not startups like Digital Equipment. They're startups of people who want to monetize it by selling it off to somebody else, as opposed to Digital Equipment where they tried to build a business that would last.

I believe that the practice of management, I think there is a body of knowledge, skill, art, I don't know what it is, that could be thought of as the intellectual underpinnings of the practice of management. I think there's something there that could be taught. I think management in the US is on average the best in the world. Obviously, there are outstanding individual managers every place, but if you look across the board, management in the States is pretty good. I think that has caused our economy to work well. It probably has caused some ideas

to actually take hold, which might conceivably have otherwise died. It has probably caused some big companies to flourish and embrace new ideas, where others might now have. I think the practice of management is a very important set of skills. They are important in our society.

I think to the extent that Sloan can be a conduit for embedding these skills in people, I think it's important. I put more emphasis on executive education than I do graduate education, because I think you're dealing with a subset of people that has already been filtered to some degree. They've already decided they are managers who want to be managers, and therefore they're going to make use of that information to a greater degree than just the general public. I think there's a real world out there, the executive education, that's important. I think the more Sloan does there, the better.

I think there are research frontiers that we aren't probing to the extent we should. I really do think we should get recently retired CEOs to tell us what were the frontiers they were unable to deal with in their careers, so as to see whether our academics might have some insights that would help get rid of those frontiers. Operations research, for example, certainly opened the door to changing all of the supply chain management and operational management frontiers, which prior to that time had kept companies from being efficient and effective. There is learning how to deal with people. You can't run a big company if you can't deal with people. You can't run much of anything if you can't deal with people.

I spent some time the other day with a person who is now running Citibank. He's struggling with budget problems that I solved 20 or 30 years ago. The trouble is, during that period when it was run by trading and market-oriented executives, they destroyed all the language of management, and now they are trying to reformulate it.

If it were my choice, I would focus on the practice of management. I'd emphasize taking it to a greater degree than masters programs do today. I'd spend a lot on research trying to understand what the frontiers are. What is keeping organizations from achieving whatever it is they're trying to achieve. See whether some significant number of those problems might be susceptible to new thinking. But I don't sense any of that in Sloan today.

B: Do you have some hunches as to what some of these frontiers are?

J: Certainly people is one. My head of HR was certainly one of my two most important people. Who was hired, how careers are formed, and how you train them. There are various turning points in careers where the skills needed for the next step are not ones you necessarily developed.

I'm talking to Rafael at MIT. There should be somebody here who helps professors who choose to go into the administrative: department head, or dean-type careers, develop some of the skills. The point is if we had somebody in HR whom the faculty respected. It might have to be a faculty person. It's like not being a priest in Rome. But we should help those academics who want to develop administrative capabilities to do so more effectively. It would make a big difference to MIT, and it would help the people. They'd feel a lot better about stumbling around learning.

I was talking to the chairman of Exxon recently and I said, "How do you spend your time?" He just recently retired too, and he said, "I spent 60% of my time on people. 60-70%." Exxon is probably one of the better-managed companies in the world because people at every level know what they're doing, and they're dealing with difficult situations. All you have to do is look at British Petroleum and you see the contrast. I think people skills are clearly on the frontier.

Probably some technology stuff. I've invested too early and I've invested too late and both are expensive. If you're managing a big research activity in a pharmaceutical company or something of that sort, knowing what to bet on and what not to bet on. I was on the board of a pharmaceutical company for a while and the genius or our head of research was that he killed projects early. He tried to identify those things that were most likely to kill the project and force the project to encounter those early on. The last thing you want to do is to have spent $2 billion developing a project that fails in some last test. Those kind of things.

It would be wonderful to interview the head of Boeing now. The 787 is coughing a little bit, but is it coughing more than the 747 did? I don't know; I don't recall watching the 747. But the point is they clearly made a mistake on the battery. But there are 10,000 different things in that airplane, and if it hadn't been the battery it might have been something else. The question is how to manage your way through those things.

A: I think one of the biggest challenges…

J: By the way, I could meet with you at some other time if you want to continue.

A: Thank you. We know it is summer and we appreciate you taking time out.

J: No, no, I'm in and out. I never come to MIT if I don't have a meeting because I'm not going to sit in this office looking out the windows. My presence here turns to be about 65% of my time. Raphael happens to be on vacation so I'm less likely to be here than if he were here. I was in Duxbury, my wife had to get her hair cut today, so I said, "I'll come in with you." I'm going to take some guy from Spain who runs a management school in Barcelona, because he's here in the States visiting. He asked if he could have lunch with me. I'm coming in tomorrow to see the head of one of our electrical engineering labs. I don't have a clue as to what he wants to talk to me about, but he asked if he could see me. I have no problem coming in, but I don't come in if I have nothing to do, because I could do nothing as well at home.

A: I think one of the biggest challenges you mentioned would be a redirection of research along the lines you mentioned.

J: I couldn't convince the people at Sloan to be interested in what I said. When I first retired back in 2000, I didn't have much idea of what I wanted to do. By chance I had a lot of money. I had no idea I had made money because that has never been particularly high on my list. But I did have a lot of money because I sold my stock. I paid a lot of taxes and to my surprise had some money. I would have given Sloan $60 million at the time, that is what I was thinking of, to help them strictly with research. No appetite. I ended up giving them $20 million for the undergraduate program and it hasn't paid off. The undergraduate program has not been a success.

B: But it would be a step in the direction of helping Sloan play a bigger role at MIT.

J: Yes. But I was at Sloan visiting committee, and Chuck Vest was there and Bob Brown was there. They said, "John, the most important thing in the world is an undergraduate

program for MIT." They said it would cost $20 million and I said, "Are you guys serious?" Because it's easy to say things like that at visiting committees, but you'd better think about it. They got back to me and said, "We are serious." I gave them a check for $20 million, which is now $32 million because they keep me apprised of that particular gift. But there's a broad consensus within both Sloan and other places at the Institute that that program has not been particularly well received, nor was it particularly well architected. I sort of feel like I could have spent that money on something else.

I did give some money, you probably know him, to Bob Gibbons.

B: For him and Rebecca.

J: That worked quite well. I'm quite pleased with that. In fact, I have a proposal on my desk to renew that.

The point is I was talking to Sloan when I first retired, and I taught a couple courses at Sloan, but I could not excite any particular interest on the part of the faculty in terms of focusing research on what are the barriers in the practice of management. And could we academics possibly develop some insights that might help? You know faculty. If they're all doing something, you rarely find faculty doing nothing. None of them were particularly excited.

Why don't we break now? If you guys have reason to want to continue, we could reschedule another during the summer. I'm happy to swing by. If you think you have enough for whatever you're doing, I'm happy to shut up.

A: Thanks very much.

END OF INTERVIEW