

INTERVIEWER: Today is May 18, 2010. I am Karen Arenson. We're speaking this morning with Candace Royer. She came to MIT in 1981 as head women's tennis coach and assistant director of physical education, and was promoted to director of athletics and head of the Department of Athletics, Physical Education, and Recreation in 2001. She was the first woman to hold that post at MIT. Five years later she was promoted to senior associate dean for student life. And now, she is associate director of development for athletics. Candace, thank you for speaking with us today.

ROYER: It's a pleasure.

INTERVIEWER: You have noted that over the years you've run into people who said, gee, I didn't know MIT had sports. How important are sports or athletics at MIT?

ROYER: Well, Karen, in my mind they're essential, especially at MIT. The sports programs that we run are not just about varsity sports, but rather about all of the sports that we do: club sports, intramural sports, a wonderful informal recreation program. And as much as giving balance to student life here it also gives our students another place to excel.

INTERVIEWER: And do any of them take advantage of that?

ROYER: Yes, they do. As a matter of fact, we have about 20 percent of the undergraduate population actively involved in our varsity sports programs year in and year out. On the intramural side, approximately 80- 90 percent of our students take part in intramurals at some point in their career. Many of them do intramural sports many times, and many different intramural sports. The Club Sports Program was primarily aimed at the graduate population, but we also welcome faculty, staff, and undergraduate students into that area as well.

INTERVIEWER: Do the women participate in the sports and athletics as much as men?

ROYER: Absolutely. We have the women participating at huge numbers today. In fact, the program since 1981 has grown really in leaps and bounds. We have, I think, at this point in time about 18 women's sports. And they're filled, so it's wonderful.

INTERVIEWER: And do the women come in having done them in high school as much as the men or do they discover them here?

ROYER: You know, that's the biggest change, I think, in the MIT story overall. Our men and our women are coming with high- level high school experiences. And that has created some interesting challenges for the department in the last decade.

INTERVIEWER: Why aren't the sports better known here? In other words, people say, gee, I didn't know MIT had athletics.

ROYER: I think there are a couple of things. First, is the academic reputation of this institution, which I think, overshadows everything else, and rightfully so. But we're also a Division III sport institution. And characteristically around the country, Division III sports do not get the note that Division IA sports receive. Primarily, we're here for the students. It's participation- based. That doesn't mean it's not about excellence as well, but it is participation- based unlike Division IA sports, which it has a high entertainment component to it.

INTERVIEWER: For many students in high school sports are the thing they go after. For MIT students many of them have devoted themselves to science labs, which take lots of hours. Have they had the time to specialize in sports the way non-MIT students have?

ROYER: I think the best answer to that is that about 52 percent of the students we're now admitting to MIT have had a high-level high school experience. Which means that they might have achieved at the regional or state or national level as a high school athlete. So they're learning in high school how to parse their time, how to manage their time, and they're doing both well. So they're pursuing very high-level academics in high school, but they're also achieving in music and art and sports as well.

INTERVIEWER: Do the sports they come in with tend to be the same mix of sports at other colleges or do they specialize in different ones?

ROYER: That's a great question. We offer, even today, 33 sports to our students on the varsity side. And some of those sports are unheard of in most high schools. A sport like crew, for example, or pistol or rifle aren't normally included in the high school sports program. So we have students still coming to MIT without a sport experience, who take a physical education class in pistol. And in one instance, I can remember a fellow achieving national level prominence after starting as a physical education student.

INTERVIEWER: What led to your coming to MIT? Were you recruited?

ROYER: That's another great question. I was recruited actually. The director of athletics at the time was a gentleman whose name was Royce Flippen. And he was part of one of the most famous backfields at Princeton University, so he was well-versed in athletics. He'd done many different things, I think, before coming here as director of athletics. He was probably one of the reasons I came. He explained to me during my interview process that if I came to MIT rather than going to Duke or Rice or some of the other schools, who were also recruiting me at the time that this would be a life-long career experience for me. And he was right.

INTERVIEWER: Do you remember your first impressions when you got here?

ROYER: Yes, I do. And I have maybe a funny story that I should relate to you. It's something that I don't think is written down anywhere, but it's certainly etched in my mind. First of all, there was a huge difference between coaching at the Division I level when I came to MIT to coach Division III athletes. I want to mention in that same breath that that abyss has narrowed considerably. When you go out to watch an MIT event today, whether it's women's basketball, men's basketball, rowing, whatever it is that you're watching, you're going to see our athletes performing at a much higher level than ever before. But when I came on to the scene we had a very small women's tennis team, and I would say that most of the students were really there for exercise rather than for excellence. So it took me probably four or five years to instill in the students minds and hearts that they could do both. They could get good exercise, but they could also pursue excellence in their sport.

The funny story is my first trip across the river to play Simmons College. I remember getting into the van, closing the doors, having everybody be absolutely silent. Now I can tell you, at Penn State University that wasn't typical. I'd get into the van and the first thing someone would say to me is, Coach, tunes. Which meant I should turn on the radio. So that was the first difference that I noted.

The second was I was driving across to the FENS and I was hearing this sound. Zip, zip, zip. And I heard it repeatedly. Finally, I pulled the van aside off the road and I turned back only to see three or four of the students unzipping their little calculator cases so that they could do a problem set on the way between here and the FENS. I was stunned. But I realized that this is MIT. And that particular quality, I think, pervaded all of our trips. Every time we were in the van going somewhere, the MIT student was busy trying to get something done. It was great.

INTERVIEWER: And even after you got them to focus more on tennis and raise the bar there they were still doing homework on the way to--

ROYER: Even so. Even so. I remember being at many New England Championships and one of the jobs of the tournament director is to find the students who are coming up next. So the on-deck students for the next match. People always knew where to find my students. They were in the van, usually working on a problem set. It was never a problem.

INTERVIEWER: So what did it take to make it a more excellent team? Did they have to put in 20 hours a week of practice or was it something else?

ROYER: Well, as you probably know, 20 hours a week of practice at MIT would not be possible. So we had to do it within the block of time that was afforded to us. And that's the 5:00 to 7:00 hour each day. So we had basically two hours and because tennis is an individual sport, I had a huge advantage. I was able to be there for students when they could be there. So I think part of what began to shift in the minds of our students at that time was that I was there for them. They weren't just there to represent MIT, but I was there for them to help them get better and achieve the goals that they would set for themselves. So I think that was a major part of it-- my availability, the interest that I had in doing private lessons with students so that they could actually get better quicker.

INTERVIEWER: So if you had known and understood this before you made your decision to come, do you think you would have come?

ROYER: Well, yes. I think I knew what I was getting into because my first question when I got the call from MIT about coaching women's tennis here was, are there women at MIT? And then, my second question was, are there sports at MIT? I just really didn't even know that there was a women's population here sufficient to field teams. And I think honestly, at that time we were only about 18 percent women in 1981. In that range, I believe.

INTERVIEWER: Which was way up from what is had been a decade earlier.

ROYER: That's exactly right.

INTERVIEWER: So the growth in the women's population in the following decade probably helped you field better teams too?

ROYER: Enormously. I think as we started admitting more women we did see a decrement in the number of qualified male participants that we might expect to come. But it really built the Women's Sports Program. I remember trying to start a women's squash team in 1982 or 1983. And quite frankly, there just weren't enough women to really interest them in squash at that time. We now have women playing as part of our Men's Squash Program. So it's really great. Squash and golf and some of the other sports actually can be run as coed sports.

INTERVIEWER: And if they're run as coed sports do the women compete against men at other colleges?

ROYER: Yes they do. And successfully.

INTERVIEWER: Really?

ROYER: Yes, successfully.

INTERVIEWER: You don't have to have a certain amount of strength to be successful in some of those sports?

ROYER: In some of the sports, for example, in squash it's really more about positioning and depth than it is about power. Power can help you, but you can do an awful lot with finesse and endurance. A sport like rifle, which is a coed sport here, sailing, you can compete very effectively as a woman on those teams.

INTERVIEWER: What are the dynamics of coed teams versus single sex teams?

ROYER: Quite frankly, I think it's great. I think students meet each other, they have a different relationship right from the very first. They get to know each other; they become good friends. And some of them actually do end up dating.

INTERVIEWER: What are the dynamics like for coed teams? Are they very different from all women or all men?

ROYER: They're probably different dynamics, but I think they're very positive and healthy ones. I think students who participate on coed teams really get to know the other gender much more as friends, as fellow compatriots. I think there's a real richness to that experience. In fact, one of the things that I tried to talk with my coaches about when I was department head director of athletics is that we should try to create a Men's and Women's Basketball Program. Not have a men's team and a women's team that are totally separate, but rather have fond experiences for them where they can interact and really learn from each other. And I think that's been fostered nicely at MIT. I find the teams working very well together.

INTERVIEWER: Are there women cheerleaders?

ROYER: There are. And there are men cheerleaders.

INTERVIEWER: And men cheerleaders.

ROYER: And men cheerleaders. In fact, that's an interesting story, Karen, because we to this point in time have not really sponsored the cheerleading squad the way that one would expect it be sponsored at a Division I-A institution. We don't provide them with a lot of money or travel, but they take it upon themselves to make sure that the cheerleading is at a very high quality level. In fact, that's one of the things that I've seen change enormously in the last decade. They're very professional, they're coached, and they're funded basically by the Club Sports Program itself. So they're a club sport if you will at MIT.

INTERVIEWER: Let's go back and talk about your own development and how you got into tennis. Were you very athletic as a child?

ROYER: I rode and trained horses as a child. So from the time I was nine until I was about 20, riding was really my primary sport. So was I athletic? I think yes, and in many ways, but you know, we're talking about pre- Title IX days. So there weren't very many opportunities for women in small town America when I was coming through junior high school and high school. So I was fortunate my father had a farm background. He loved horses and he was willing to consider buying me my first horse, which then became one of too many, probably over the course of that 10 years, 11- year period. But at any rate, I did a little bit in physical education classes. I learned to be a high jumper. And then when I began my matriculation at Penn State University, I took an introductory level physical education tennis class. And that's what really turned me on to the sport of tennis. I then took more classes in sequence. I changed from being a psychology major to a physical education major. I really focused on tennis and started to play on the team as a sophomore at Penn State main campus university--

INTERVIEWER: On the varsity team?

ROYER: On the varsity team. But again, remember, this was pre Title IX, so the available talent was not very deep. You might have a good number one and two player and then it dropped off precipitously after that. So I was kept as the twelfth woman on a 12- woman team and worked my way up into the number 6 singles spot by the time I graduated from Penn State.

INTERVIEWER: How much time did you practice and did you spend summers doing it?

ROYER: Probably too much practicing. Now I practiced a lot. We were fortunate. We had an indoor tennis facility at Penn State at that time, so any free time I had, other members of the team and I would go out and hit. I learned a tremendous amount. And then probably, the tennis life-changing experience for me was becoming a counselor at the Chase Tennis Center at the Westtown Quaker School just outside of Philadelphia. Those two summers, probably I learned more than I could have in 10 or 15 years of sort of muddling about on my own. Ed Faulkner was the teaching professional there and he had coached many of our Davis Cup Teams. All the way back to the time when Bill Tilden was a famous player. So it was a really good teaching- learning experience for me.

INTERVIEWER: What about tennis grabbed you so much?

ROYER: I think I first loved this feeling of hitting a tennis ball, being able to sort of control the ball and understand the-- I won't say the physics of it, but sort of the nature of how you impart spin to the ball. I loved that feeling. I also really loved the quality of the people that I got to know through that sport. It was great fun. The competition, you know, your opponents across the net from you. And at the beginning of the match you would chat, at the end of the match you would sincerely congratulate each other. It just seemed like the right way to play sports, and I really enjoyed that aspect of it.

INTERVIEWER: Had you done the horseback riding competitively?

ROYER: I had. I had. I showed to the state level, so it was a wonderful experience through the 4-H clubs of America, actually, it was the conduit to the state level. It really took my life for I think I said 11 years that I participated in riding. But we also raised horses. So I got to know a lot about animal husbandry and we raised appaloosas and quarter horses.

INTERVIEWER: Was that your father's full-time or your mother's full-time job or did they do other things too?

ROYER: It was my father's full-time job after he retired from his full-time job.

INTERVIEWER: Which was?

ROYER: He had several businesses. The last one, the one that I remember the best is a sporting goods store. But mostly around fly fishing and hunting. It wasn't the soccer ball kind of sporting goods store, but rather really, highly focused on what men particularly, in central Pennsylvania are focused on in their avocations, which is hunting and fishing.

INTERVIEWER: Did you have sisters or brothers, and were they athletic?

ROYER: I had a brother who was much, much older than I. So by the time I came along he was serving our country in Korea. He went back and served during Vietnam, and he came back to a police job in the little town of Lewisburg, Pennsylvania. Where ultimately he became chief of police. He was not athletic at all, but he really enjoyed watching sports and he totally enjoyed hunting and fishing. **INTERVIEWER:** And did your father get into the horses because of you or did you get into them because of him?

ROYER: Oh, he would remind me if he were alive today that he definitely got into it because of me. You know, that first horse, that first riding experience led us down that whole road of eventually training and racing horses. It's a very expensive hobby.

INTERVIEWER: At Penn State, when you started getting interested in tennis, the coaches and the phys. ed. department were willing to accommodate you and help you? Or did you have to do it on your own?

ROYER: Another wonderful question. Back in that day, women sport coaches were usually not paid. They did it because they loved their sport and they wanted to instill in others the love of that sport. So yes, I'd have to say they were more than accommodating. They were encouraging. They did anything they could to make sure that you had good experiences. I'll give you an example.

When we first started, I think this was probably 1970. Many, many times the women who coached would actually pay for our trips out of their own pocket. So not only were they not paid, they were actually spending money to make sure that we had a sport experience. Extraordinary group of women, pioneering women who really laid the foundation for women's sports today.

INTERVIEWER: And you were talking about how much you learned during your summer experiences. What kinds of things did you learn?

ROYER: You know, one of the first things I learned was that you really have to guide people in your teaching rather than sort of command them. It was interesting. I really thought when I first began teaching at the Chase Center that the students would just take everything that I had to tell them and they'd do it immediately, and they wouldn't question me. And I found very quickly that that was not the case, and it was a lesson that has served me well throughout my teaching career. To be able to explain why you're asking someone to do something a certain way rather than just direct them to do something a certain way. That served me especially well at MIT because as you know Karen, people at MIT question and are curious and challenge. And quite frankly, had I not had that experience early on I'm not sure how I would have responded. But it was exactly what I came to expect, and actually, enjoy about coaching.

INTERVIEWER: What made you choose Penn State as the college you attended?

ROYER: There was no choice. My father grew up about 14 miles from State College Pennsylvania and so when I became I think, a sophomore in high school, my parents started talking to me a little bit about college. And about my junior year-- I'm going to digress for just a moment. My mother asked me where I was going to go and I said, well, actually Mother I was hoping to talk to you and Dad about sending me to England because I'd really like to take the horse masters class in England. And then, become a professional rider and trainer. And my mother, I can still see her-- without a breath she said, well, I'll tell you what, we'll do that after you have a four-year degree from the institution that you choose. And I thought, well, that's a pretty good deal. So I'll spend four years in college and then I'll get to do what I really want to do.

Well, the rest is history. I chose Penn State University. My father was a huge proponent of my going there because it was close, it was nearby, but also because it was the one school that he had heard of. My father was eighth grade educated. He grew up on a farm in central Pennsylvania, so he didn't have a deep knowledge of Harvard, Princeton Yale, and other institutions, but he knew Penn State. He'd sent to me there a couple of summers as part of a 4-H program to learn about animal husbandry and other related topics to horses. And so, it was pretty clear to me that that was the school that I would be attending.

INTERVIEWER: And you said that when you initially enrolled you had been thinking about psychology. Did you expect to have a career and what did you have in mind?

ROYER: I probably have the first issue of *Psychology Today* still somewhere in my home. I just was fascinated by the concept. And here again, that was something that I minored in with my master's degree in psychology of sport. It's something that served me very well as a coach, and pretty well as a teacher as well.

INTERVIEWER: When did you start thinking about staying in sports and athletics as a career? And, what did your parents think about that idea?

ROYER: My father passed away about four months after I graduated from Penn State. So Dad probably would not have thought that was the best idea. I remember him saying to me at one point in time when he learned that I was going to major in physical education that he was worried that I'd be able to support myself as a physical education major. My mother though, was very supportive and when I decided to become a tennis teaching professional, which is what I did for almost five years after graduating from Penn State, she supported that. And she went with me on the interview and sort of stood by while I went through that experience. And even though I wasn't making as much money as I could have made had I accepted a teaching job, which I had an offer on the table, she said, you know, you really should follow what you want to do. And I said, Mother, I really think I want to dedicate my life to tennis. I love teaching tennis. I loved the soft skills that you can teach, as well as the hard skills-- the biomechanics of sport. But I said, I really just love the sport and I'd like to pursue this. So she supported it and me, actually, for a couple of years until I got a really good job in the Philadelphia area teaching at one of the [INAUDIBLE] there.

INTERVIEWER: So you didn't simply stay at Penn State all those years?

ROYER: No, that's right. I left Penn State. I graduate in 1971. In 1972 I went back to the tennis camp, and that fall I started as an assistant teaching professional at the Garden Fair Racquet Club just outside of Philly.

INTERVIEWER: At some point you did go back to school for a Master's? How did that develop? How did those intervening years work out?

ROYER: Well, as I said, I taught tennis full-time and that was about 40 hours a week plus at an indoor racquet club-- indoor/outdoor racquet club in Philadelphia. And after about five years of that I thought, you know, where my heart really is working with students. I was part of the Philadelphia Gold Cup Program, which was a program that we ran for underserved students in the Philadelphia area. We started teaching them at 6 o'clock-- 5:30 or 6 o'clock in the morning on Saturday mornings. Had them for about two hours. And through volunteering time in that program I realized that I really wanted to work with young people. So the only root for me at that time back into the college ranks of coaching and teaching was through a Master's degree. So I started my Master's degree program at Penn State University in 1976. I assisted my former coach there for a year. She decided to retire and Penn State decided to hire me as their head women's tennis coach.

INTERVIEWER: So you were juggling both the full-time coaching job and your work on your Master's degree?

ROYER: Sometimes I look back on those days and wonder how I got it all done, but I did. I really enjoyed the coaching tremendously. But I was teaching in the Department of Physical Education six days a week at that time. We had classes on Saturday morning. So anytime I traveled with the team, which was about every other weekend, I was doing lesson plans for half a dozen or more classes. That was probably the greatest challenge, is getting someone else prepared to teach your class rather than being able to teach it yourself.

INTERVIEWER: How good was the Penn State women's tennis team while you were coaching it?

ROYER: How do I answer that humbly? We were very good. In fact, I had a reunion with several of my players just this past fall. I haven't seen some of these women in almost 30 years. And we were reminiscing about how wonderful it was to get out of the van, arriving at our venue for competition, and really (a) feeling like team and (b) feeling really, really confident about our ability. We achieved great success. We competed mostly against the Ivy League schools because frankly, the state schools in Pennsylvania were not strong enough. I think we maybe had one or two matches a year against state schools and everything else was at least four and a half hours away.

INTERVIEWER: Talk about your Master's degree topic. It seems like it was very analytical, something that sort of fits neatly into an MIT- type of framework.

ROYER: That's a very good comment, and I think it does. In fact, I was really happy to have had the experience of looking at the tennis serve at 500 frames per second. To be able to really analyze what's happening when you hit a tennis serve. I was really privileged and honored to be able to do this study at Penn State because back at that time we were doing very basic analyses in motor learning. So my advisor, Bob Christina really took a chance on me to allow me to do something that turned out to be much more of an applied study. So yes, looking at the tennis serve to basically understand where the power segment is in the serve was enlightening because we found some things out that we didn't know before.

INTERVIEWER: What did you find?

ROYER: Well, the basic power comes primarily from the legs. And we really thought there was a time at the tennis serve when you snapped the wrist into the serve where a lot of power is supplied. As it turns out, that's a transfer. It's a bridge, and it has to be there. But the real power, like in golf, comes from the legs and the turn. And if you lack either of those things you're not going to make it up by snapping your puny little wrist into the serve.

INTERVIEWER: How much science did you have to have to be able to conclude that?

ROYER: Quite a lot. And you know, I'd love to see that study replicated because now Bob Christina said to me, you're kind of doing this before your time. In other words, we didn't have a three-dimensional motion analyzer camera at that time. So I had to approximate the points that I was analyzing. My data was lost three times, so I had to go back through all that film three different times on a PDP-11 computer. Some people around here might remember what those are, but everything was done on cards so all of my analyses was done on computer cards, punch cards, which we had to punch ourselves back in the day. It was quite laborious, but I learned a tremendous amount about myself in terms of perseverance. And I also learned a lot about biomechanics, as well as motor learning.

INTERVIEWER: How did you come up with that as your topic in what you wanted to pursue? And did you know that it was going to be doable?

ROYER: The serve had always fascinated me. I had trouble learning the serve because I started so late to play tennis; I was 18 when I started to play. And it was always problematic for me. So I thought, if I get a chance to analyze it, I'd really like to do that. Plus, I'd had those five years of watching, particularly women have great difficulty learning to serve because they're throwing motions were so undeveloped. And so again, I thought if I can break this down and really understand it maybe I can teach it better. So that's where the motivation was.

INTERVIEWER: Did your serving get better after?

ROYER: Yes, it did. I'm a much better tennis player now, even at my age then I was in college. I learned a lot through teaching and through coaching. And I think that's what happens. You analyze so much that you learn to self-analyze pretty well and improve your own game.

INTERVIEWER: Were you able to translate what you had learned in your Master's thesis into teaching your team or coaching them into being much better servers?

ROYER: I like to think so, although I have one student who will call me from time to time and say, you know, coach, I'm still having trouble with the serve. It's better, but I'm still having trouble with the serve. But I think primarily in my classes, as well as when I was engaged in coaching, yes, it was a stroke that I felt very, very comfortable teaching and breaking down.

INTERVIEWER: As technology has grown better have there been other studies of tennis serves that you've come across or is it kind of an unexplored area?

ROYER: You know, there's a lot of film and there's a lot of analysis, but I don't know that anyone has ever undertaken such an in-depth analysis as I did of the serve around the same investigation. You know, looking at the segments of movement and trying to discern where those differences in power might come from. But I really don't know. I haven't studied the literature in recent years very closely.

INTERVIEWER: Given the time you had spent in Pennsylvania growing up and working there, and given the experience you had coaching the women's tennis team at Penn State, what prompted you to be ready to move?

ROYER: To make that switch? There are a couple of things. First, I mentioned Royce, and I thought that he did a wonderful job during my interview process here. I also had lived in central Pennsylvania my whole life. So I thought it would be nice to live somewhere else. When Duke called me I thought, well, that's the south I don't know much about the south, but I'll go down and interview there. And then when I got the call from MIT I thought, well, the New England states have always been of interest. It's a beautiful place, particularly in the fall of the year. So I was ready to make a move. But there was something else that kind of spurred me to look outside of Penn State, and that was that at that point-- so this was 1980. Penn State decided to remove scholarships from some of the programs. So the non-- what should I say? The Division I programs that were not televised, that were not football, basketball, and hockey. So I decided that it would be very challenging for me to build the team that I thought I could build there without any scholarship aid at all. So feeding that into all of my decision-making sort of made me think that this was a good time for me to move on.

INTERVIEWER: And yet, you probably could've moved to a college or university that did give athletic scholarships. But in the end you came to one that doesn't.

ROYER: I did. Again, that decision-making was more around a career choice. I always wanted to think about teaching and being an educator rather than just coaching. So had I gone to Duke University I would have been a Division I-A tennis coach. I would have done a lot of camps during the year to attract the best students to that campus. I would've had scholarships, and I'm fairly confident that we would have had a very competent program there. Certainly people went on to prove me right about that, Duke University has been among the top 20 schools in the country for a long time in Division I-A tennis. But MIT was different, and you could feel it when you were on this campus. After the first couple of years I really knew I'd made the right choice for me because of the quality of the student more than the quality of the student athlete. It's great fun to teach at MIT.

INTERVIEWER: Did the Title IX changes mean much for MIT? Can you talk a little about what that was about and how that applied here, if at all?

ROYER: I think Title IX did have an effect at MIT. I've talked to some people who were here in the 70s and the 60s who really struggled to find outlets for their athletic abilities. And I think if you interview some of the people of those decades you would hear some stories about that. So I think Title IX really did help, although by the time Royce Flippen arrived on the scene, and I think that was probably-- oh gosh, probably 1980. I think he was only here a year before I arrived on the scene-- some very good things had happened for women. Some of the teams had been developed. They were not at a very high- level to begin with, but that's pretty normal. But over the years we certainly have invested I think, as much in our Women's Sports Program as we have in our men. And that has been a point of pride for us in the department for a very long time.

INTERVIEWER: Has MIT changed much since you first arrived?

ROYER: I think so. I really do. I think the sort of student who applies here now is also applying to Harvard, Princeton, Yale, Stanford. I think we attracted a different population 20, 30, 40, 50 years ago. But it seems that we're admitting many more students who have what we call a well-rounded background. So they're experts in something other than math, science, and physics. And I think it's made the campus-- it's normalized the campus in many ways. The emphasis is still there on high-level academics for sure. The students are still very challenged and that's what they come here for and I don't think our professors disappoint them in any way. But they want something more, Karen. They really want to pursue these other avocations if you will or outlets to a very high- level.

In fact, I should tell you this. Our women's tennis coach currently played for me in the 90s, went on to get a second degree at MIT so that she could finish her athletic career here, and then went on to get a master's degree in psychology of sport. And she returned under the time that I was here as director of athletics. She returned as an assistant coach, and within a year or two I was able to offer her a full-time position, my old position essentially as head coach. And she's here today.

INTERVIEWER: Was this somebody who had played tennis before she got to MIT or did she, like you, start when she got to college?

ROYER: She played on a men's team, a boy's team in high school. I have to say, she took one of my early tennis classes or she took a tennis class of mine early in her career here and I saw tremendous ability. But she needed a lot of work in terms of her stroke development. And so I offered to have her come out for the team in the fall of her sophomore year, which she did. And the rest, as they say, is history. She became my number one player. And she, today, is an excellent tennis player and she's an even better coach.

INTERVIEWER: Does MIT do any kind of athletic recruiting? Can it do anything to bring in strong athletes so that you're starting with raw material that's up a level?

ROYER: That has changed also. I think in the last decade or more. We now have coaches who are very astute at developing pipelines for the right students. Now I want to say it that way. I want to underscore that because obviously it wouldn't do us much good to go to tennis competitions and find out if our students can do math well. But it does serve us well to work with high school coaches who understand the kind of student that we're looking for and who can send us the students who can not only survive but flourish at MIT academically. And also, who are high-level athletes. And we're seeing that more and more.

Our women's volleyball team almost doesn't have to hold tryouts anymore. And that's for me, an old line physical educator as I am, is good news, bad news. The good news is that he has a highly developed pipeline of students supplying because of the quality of that program. The bad news might be that students don't have an opportunity to start to play something that they would really learn to love and perhaps have opportunities to become good at. However, that said, we still do have the Club Sport System. So students can have an awfully high- level experience in our club sports today as well.

INTERVIEWER: Does MIT give any preference to good athletes if they can also do the math and the science?

ROYER: I'll tell you how I think it's working at this point in time. Our coaches are able to put something into the file that identifies the student as someone who they believe are qualified academically. That's first. And secondly, as a student athlete who would make a difference on their team. What happens behind the doors of admissions beyond that I don't really know. But I have seen the shape of the class change, and I think that we probably admit as many high-level musicians and artists as we do athletes.

INTERVIEWER: Because it's interesting, MIT's director of admissions at the moment, not only was an ardent athlete-- I guess he was a rower when he was a student here, but he actually worked as a coach and teacher in the Department of Athletics before moving into admissions. Do you think that gives him any kind of extra sensitivity or interest?

ROYER: First of all, Karen, I want to say he was not a plant from the athletics department. Stu earned that position solely on his merit. But I think Stu does get it. He certainly has coached many, many student athletes through one of the toughest sports here, which is the rowing. Rowing exacts much more time, I think, than many of the other sports. They're up early, they're on the water. The season is very long. It's still going on as a matter of fact, I believe, at this point in time. But Stu understands the complete picture. He understands what it takes to be successful here academically. He also understands that athletics can feed into that success in a really beautiful symbiotic way. I like to think that Stu is good for athletics, but I also think that Su is good for MIT, and he's certainly good for shaping the class in a well-rounded way.

INTERVIEWER: Besides coaching tennis, you had responsibility for phys. ed. classes and the Phys. Ed. Program. Tell us about the program and about MIT's phys. ed and swimming requirements.

ROYER: I love our physical education program. It, for me, is one of the best physical education programs in the country because of the breadth, but also the depth. So the breadth is about all of the different activities we offer. The depth is about having physical educators who are also our head coaches. So they understand the sport skills that they're teaching at a very, very deep level. I think it's a great advantage.

Many, many institutions don't have a physical education requirement any longer, and if they do they often hire outside people to teach those classes. I don't want to denigrate that experience but I do think there's a certain richness in having someone who is coaching high-level athletes to national prominence teaching in a physical education class and a basic skills class in what they can give to the MIT student who's just trying to fulfill their physical education requirement. I also think the students have a better time today because we do have so much breadth. So you could take 801S, the Physics of Sport, using scuba diving to understand better fluid mechanics. So there's a really wonderful relationship between the academic side of the house and the athletic side of the house in a course such as 801S.

We also have a Ski Program now. We have actually for many years, we've augmented that with an outdoor education program. We do that over a weekend in the fall. What is it? The Veterans' Day holiday I think. We take students north and we have them understand orienteering. And, if there's snow at that time, snow camping. It's just a great opportunity to have students see the beautiful area that they're in and learn skills that can serve them for a lifetime.

INTERVIEWER: Do you have coaches who simply don't want to be bothered with teaching phys. ed. and therefore, either not come or leave or kind of moan and whine about it?

ROYER: Oh, I can't sit here and say that there never has been any whining about it, but it's mostly about the time commitment. You know, when you're a coach and you really want to focus on having your students be all that they can be, and have them be competitive in the various leagues in which we participate, there's never enough time. There's never enough time. So it's mostly about the time. Once they get to class they enjoy it very much. But I think there are days when some of the coaches would say, gee, I wish I really didn't have to leave what I'm doing on the coaching side to go teach a physical education class. Yet and still, they are faculty coaches. And so, one of the things that attracted me to MIT was this notion that I could become a tenured faculty member at MIT in physical education. I mean what can be better than that?

So, it was very attractive. It's something that I've worked very hard as formerly as department head to maintain that close connection to our academic faculty, so that students really do see us in an academic way as well as in a highly qualified sport coach environment.

INTERVIEWER: How many students make it to senior year or to the weeks before graduation without having completed their phys. ed. requirement or the swimming? And what happens then?

ROYER: When I was the director of physical education I would have answered that question very simply by saying, too many. But I think we are doing a much better job today of making sure that students are not taking the swim test on the morning of commencement. And that there were instances of that, I think, 20 or 30 years ago. But Carrie Sampson Moore, who's our present director of physical education does a superb job of attracting students into the pool as freshman, and then, throughout the year providing testing opportunities for students. We even have gone. I think, the direction of providing single gender swim opportunities because we have a lot of students who religiously cannot be in the pool with the opposite gender. So that is all a much more clear and complete package. So I don't think we have more than maybe 50 or 60 students now at the end of their senior year without the swim requirement taken.

INTERVIEWER: And most of them somehow get through it in the last couple days or are they simply ushered through and people sort of say, ugh, okay.

ROYER: No. No one is ushered through. In fact the academic side of the house really supports us in this. The physical education requirement is a General Institute Requirement, and it's treated exactly as the other GIR's. So leading up to commencement, leading up to senior year, we have put many, many things in place to remind the students, and to have them enroll in the class so that they don't end up in their senior year, last semester, having to take five physical education classes. The idea, and what we've tried to implement, is a system that front-end loads this, so that students have an opportunity when they're not under the pressure of graduation to really enjoy physical education classes. And maybe develop some skills that they'll pursue throughout their MIT career. So there are little safeguards along the way now, reminders that come from actually the senior associate dean for undergraduate education. That if they don't fulfill the requirement by thus and such there are fines that will be implemented and that kind of thing. They're small, but they're reminders that we want to keep you moving through the program.

INTERVIEWER: As you mentioned, many other colleges including for example, Princeton and Harvard have abandoned phys. ed. and swimming requirements. But in all the discussion about institute requirements in recent years, I don't recall hearing any about the phys. ed. and the swimming. Is there any debate within MIT about whether these requirements ought to continue to exist?

ROYER: Actually, the task force on the GIR's a couple of years ago asked us many questions about the requirement. Both Carrie Sampson Moore and I as department head presented to that committee on separate occasions. Once together and once I stood in because we didn't have a director of P.E. at that time. But we were able to be, I think, very convincing that this is something that should remain a part of MIT's general Institute Requirement. We've had so many students tell us how much it meant to them, not maybe while they were doing it, but in looking back. Even the swim test.

We've had many students, alumni write to us over the years saying that had they not had that experience they wouldn't have exposed their own children. And what a pleasure it is. How much value it's added to their lives as a family. So that anecdotal evidence, plus the actual helping students understand the physiology of exercise through our classes, there is that component part to the physical education program. And I think it's a good one. The academic professors around the table on that committee agreed, and supported it fully in their task force report.

INTERVIEWER: Have there been noticeable changes in what students sign up for, what they're interested in, how they fulfill their phys. ed. requirements?

ROYER: That's a very good question. You know, pistol has always had special appeal to MIT students. And I think for two reasons. One, it's not something that's offered in the mainstream. But also, MIT students get very good at shooting, very quickly. So it's something that they sort of talk about with each other and our pistol classes are always oversubscribed. I think that's one certainly. The lifetime sports, tennis and golf, have always been very, very well attended. The scuba classes, the specialties classes, the orienteering, the skiing, some of the things that we offer outside of MIT are very popular classes.

INTERVIEWER: Is pistol maybe popular because people see it as something that won't tax them physically?

ROYER: Maybe. Some people that don't want to perspire may take that class. It's very hot down there though, so they don't really avoid that. I think that's probably true of some people, but I think it's also true of sort of the cerebral nature of the sport of pistol. We used to teach a rifle class here as well. In fact, I taught in that program for several years. I found that our students really, as I said, picked it up very quickly. But also used it sort of as a springboard to get onto the team. So they had a team experience through that Rifle Program.

INTERVIEWER: Why did rifle end?

ROYER: Rifle still exists as a varsity sport, but the weapons are very expensive. And to keep them at a quality level that they're safe to be using, we found to be pretty challenging. So we abandoned that program, probably in the late 80s, early 90s.

INTERVIEWER: In 1996 you were one of two MIT professors to receive the Everett Moore Baker Award for Excellence in Undergraduate Teaching. You were said to have had, quote, "an incredible impact on your students as an educator, as a tennis coach, and as a human being." You've talked a little about how you love teaching. Can you tell us more about your style and what you're like as a teacher?

ROYER: You know, you really have left no stone uncovered, I think. Probably the highlight of my entire career was hearing that that award was going to be given to me. I think primarily because it is a student selected award, and to have the students who've come through your classes believe in you enough to want to recommend you for that particular award, it was a highlight. It still is. It always will be. I like to think that one of the reasons for my success as a teacher is that I really, truly care. And I believe that any student, if they apply themselves, can learn a skill at a very high- level. And I think that comes across in the teaching. Whether it's in the classroom, on the tennis teaching courts, or whether it was actually in the coaching realm. I love to teach. It's really one of the reasons I came here rather than going to Duke or to Rice. I knew I would be able to teach as well as coach, and while I never expected such a wonderful humbling reward as that award, but it did come to me, and it will remain a highlight.

INTERVIEWER: I'm interested in your comment about anyone can learn a skill at a very high- level. I think of sports and athletics as being tied to some kind of physical ability and natural ability, is that not the case?

ROYER: There are very few people, in fact, they're going through my mind right now. The people who I have experienced who simply did not have enough coordination to learn a skill, but the natural ability thing is highly overrated I think. And I'll give myself as an example. Who starts playing tennis at 18 and achieves a high- level of ability? Well, lots of people do. I did, and lots of others do. Again, it's that application. You really have to dedicate yourself to it. And as Jack Barnaby once said, "you have to practice the ordinary over and over and over." And he was right about that. He also said that, "the biggest deterrent to learning how to hit a tennis ball is the tennis ball." So practicing shadow stroking should not be underrated, you have to lay down that stroke pattern before you can hit the ball.

INTERVIEWER: So when you were learning tennis, how did you organize your practice for yourself, and how many hours a day were you putting in?

ROYER: You ask such good questions. I had the advantage of an illness my junior year in college, which caused me to have to drop out of school for a semester. During that I was highly engaged in tennis at that time. I used to stand in front of the mirror, full length mirror in my bedroom, and practice all of the strokes. No ball, just practice the strokes and try to perfect them as much as I possibly could. That was a huge advantage. Laying down those motor muscle patterns that year made me more able to put a better swing on the ball when my feet got me to the ball. So it's that basic practice, whether it's with a ball or without a ball, always useful.

INTERVIEWER: You were named director of athletics in 2001. What did that job entail?

ROYER: Wow. I could spend a long time talking about that. It's a large program. So what we have is a Recreation Program, and during my time in the chair we opened the Z Center; one of the greatest things that many people will tell you happened on this campus. It has the physical education components of the required physical education program, the Club Sports Program, the Intramural Sports Program, and this vibrant Varsity Program that I'm not sure if you know this Karen, but it's now ranked in the top 10 in the country in Division III. We were not in the rankings 10 years ago, 11 years ago, so it really has come a long way I think in terms of the varsity sports side.

Being the director of athletics and department head in athletics and physical education was one of the great opportunities and privileges of my life. It's such a multifaceted program. We affect so many different segments of both the on campus population community as well as our alumni community. So you feel this tremendous responsibility, I think, for the lives of a lot of people. And I took that very seriously.

INTERVIEWER: What puts a college in the top 10 in Division III? Is it a question of how many games you win or what?

ROYER: It is. It's a matter of looking across the sports that are sponsored by the NCAA and it's kind of a breadth and depth award. So you have to offer a certain number of sports to even be in the running, which we do. And you also have to get to a certain round of play at regional and national level championships. That's how you accrue the points that put you into this ranking. So it's primarily a numerical ranking considering the number of sports, both men's and women's sports that you have, as well as how far those teams get in their various competitions.

INTERVIEWER: Which seems to suggest that there's been more emphasis on making these teams better or that you were getting better students, or what?

ROYER: Both. I think the students are pushing us more than we pushing the students. I mentioned earlier that students come here now with a higher- level high school experience than they did 20 or 30 years ago. And because of that they expect to have the infrastructure and the coaching and the out of region and in region opportunities to compete as a matter of course. It's something that we really have to pay attention to. Roberts Field, for example, our new turf field that's inside Steinbrenner Stadium-- many of our students had played on turf before arriving at MIT, and so for them to get here and play football or soccer or lacrosse on a natural field that was not up to par was just unacceptable. And Mr. Roberts and his wife and daughter; his daughter was a soccer player for us, realized that and made a huge contribution to enable us to build that field in 2008.

INTERVIEWER: Does it take a lot more hours on the part of the students on these teams to be that good, and does anybody suggest that that's inappropriate?

ROYER: We have very few conflicts with the academic side of the house in terms of our student athletes traveling. And that's where, as you experience higher- levels of competition and excellence in competition, the post season can be a real time drain. But the students are asked by their coaches to sit down with their professors and talk with them about their travel schedule so that in most cases, everything is anticipated. And so, students plan ahead and that's a great skill I think. But they plan ahead and are able to handle then the post- season competitions without having it affect adversely either their relationship with their professors or their performance in the class.

INTERVIEWER: Does MIT look at the academic performance of the student athletes versus other students? It's certainly been an issue at some universities in this country, ones that tend to draw I guess people who really want to be in sports and not in college, which clearly isn't the case here, but does MIT follow this and measure and do we have any idea how these students do academically?

ROYER: We follow and measure all of our students in terms of their graduation rate. And we do not see any difference between student athletes and students in terms of their graduation rates. So they're basically coming through MIT at the same rate. In fact, we did a study a few years ago looking at the recovery of students in their freshman year after fifth week flags, and we actually found that student athletes recovered at a better rate than non-student athletes. Why is that? Well, first there's a team camaraderie. So if I'm having a problem and you're my big sister, you're going to help me. You're going to help me get through MIT with whatever that problem is and you're going to support me. The second is the coach. Now the coach is very academically astute here. They understand why students come to MIT primarily, and they're there to support that mission. So they're constantly checking in with students and asking questions about how they're doing. I always like to say to parents when I was athletic director, when push comes to shove, we push them back to the academic side of the street.

INTERVIEWER: Although a small number of other major universities had named women as their athletic directors by the time you were named to that post, you were the first in the Ivy plus group that consists of the Ivies plus MIT, Stanford, and the University of Chicago. What was it like to be the first woman in that position here? Did you encounter any outright opposition or hostility at MIT or even among its alumni, or among the coaches?

ROYER: First of all, it was a huge mantle of responsibility. Being the first in anything I think you're sort of paving the way in some ways for others to follow. So it was a great responsibility; it was also a great privilege. Yes, I think internal to the department there are always going to be people who think, well, this job should have gone to a man. It always had, and I think it's very interesting that the last two athletic directors have both been women. But yes, there was some of that I think early on. It dissipated over time once people became more comfortable with the idea that I wasn't going to destroy the department, but rather try to build it. It's a scary thing. The sports have been a man's world for a very, very long time. And so, for women to take their place in that world required quite a lot of strategic thinking, I think, about how to do that. I think there's something else and I think the ability of many of us who are in these high-level athletic positions to become collegial with our male counterparts is hugely important.

There's always mystery and intrigue around what you don't know. And I think that there are a lot of male athletic directors who didn't know what to expect from female athletic directors. And once they found out that we pretty much are just like they are in many ways, we have huge interest in what happens on the field of play, a lot of that began to dissipate. I never felt anything really so much outside of MIT, but I did feel, even to the day that I was promoted into another position, that we weren't well enough known as an athletics program. That always disappointed me, so I'm glad to see that changing now.

INTERVIEWER: Did the women athletics directors around the country ever meet together to compare notes or experiences?

ROYER: All the time. There's a organization called NACWAA, the National Association of Collegiate Women Athletic Directors. And one of the things that you do at NACWAA is talk about the challenges that you're having, you also are sharing success, and you're also supporting each other. So I think that organization coming on the heels of the AIAW, the Association of Intercollegiate Women's Athletics, which was the precursor to organization, to our being absorbed if you will into the NCAA. As the AIAW dissipated, it was really nice to have NACWAA come up and serve that role.

INTERVIEWER: Do you think that you or women in general manage or lead any differently from men?

ROYER: Yes. I think we hold similar core values, but I think the way we get to those things might be different. You know, I suppose it varies woman to woman, but I think there might be less command and control kind of thing that's existent among most women athletic directors than I've seen among many men athletic directors. I think we worry more about the individual, perhaps, than we do about the whole team. I think there's a certain individual focus from women in sport or maybe even in teaching as well. But beyond that, I think we all have to be concerned with where the money's going and are we truly serving the entire population? I like to think that there's a lot of egalitarianism across sports program management. Certainly there is at MIT. We pay huge attention to-- as Phil Clay would say, "not creating have and have-nots." We want all of our students to have a great athletic experience here.

INTERVIEWER: It's sometimes said, and I think it was an old stereotype that women are more interested in making people like them than in winning. Do you think there's any truth to that, and if so, do you think that playing competitive sports changed that in any way or leveled the field so to speak for the girls or the women who do participate?

ROYER: I'm smiling because I think that was really true 20 or 30 years ago. I think most women today understand that they can be fierce competitors on the field and leave the field of play and go have a soft drink, a beer, whatever with the people that they just played against. And I saw that exhibited actually, really nicely when I took the women's soccer team to England a few years ago. We played very hard against the university teams there. We lost, but we didn't lose by much, and we had a fabulous time with that team after that game was over. It kind of harkens back to the years when I was playing where you'd go out on the tennis courts or on the hockey field and you'd play really hard and then you'd have tea and crumpets afterwards. And we kind of pooh-poohed that I think as developing athletes back then. But you know, it's really the right way for sport to exist. That you give it your all when you're on the field, and then, when it's over it's over.

INTERVIEWER: You've taught a freshman seminar on leadership at MIT. How did you start doing that and what did the classes cover?

ROYER: One of the great joys in my recent life has been to stay engaged with the students through this leadership seminar, which we call, "Good to Great for Women" with apologies to Jim Collins if he minds us using the title of his book. But we started this class because we felt that it was important to expose freshman women to leadership concepts. dean Julie Norman in the Office of Undergraduate Education and I, along with our former dean of admissions, Marilee Jones, talking over a glass of wine said, you know, we really see what happens often to students when they come to MIT. They come in as leaders and then they get absorbed in all of the things here and they feel the pressure and sometimes there's a decrease in their self-confidence because they're so challenged. What can we do to have that not happen to freshman, particularly freshman women? So that was the genesis of the idea. The three of us just talking over a glass of wine, and then Julie and I taking it upon ourselves to create this class three years ago. And to make it part of residents based advising. So not only do we teach this seminar in McCormick, and last year we expanded to Next House. But we also advise the students who are in the class. So each of us take on six freshman women and teach, as well as advise them through this class.

INTERVIEWER: And do you do case studies of leadership?

ROYER: We do. We do case studies of leadership. We actually used Jim Collins book in the first year, and just found that MIT students didn't want to spend that much time reading. So we've tailored the class each year, but every single year we have brought in leaders, female leaders from within MIT and beyond MIT to serve as our speakers series. And then we go on to investigate and expose these students to the actual concepts that the speakers are talking about. Things like mentorship have been huge.

INTERVIEWER: After you were named athletic director you noted that the department had been accused of trying to do too much for too many and therefore, falling short. Was there anything you could do about this?

ROYER: There was, and it was called the strategic plan. The department had never undertaken a strategic plan and in the year before Dick Hill left he was encouraged to have the department go through that experience. He asked me to chair the Strategic Planning Committee, little did he know that in four or five months I would be rising to this other position, but it served me well because I was around the table. I was co-leading the strategic planning process with a gentleman who had been a college president and also the president of the Museum of Science, David Ellis. And it took us six months of investigating and talking with all segments of this campus community to divine that yes, indeed, it felt like we were putting too many eggs in the varsity basket and we needed to make sure that all of our students-- graduate students, as well as undergraduate students-- were being taken care of in the department. And we made some significant changes.

INTERVIEWER: Like what?

ROYER: We prioritized differently. Obviously there's a certain amount of money that has to be spent on varsity sports because of the travel component, but we wrote a good case for increasing the amount of money that we would receive from the Institute. Actually, we received it from the dean for student life at the time. He gave us a huge infusion of funds to augment the club sports budgets. We did everything we could to make sure that we had the right people, more than finances in place to help the Intramural Sports Program. We looked at physical education differently, so that we were offering things that were interesting to graduate students as well as undergraduate students. So we really tried to make sure that the pendulum would swing back a little bit more in favor of creating a good campus community feel to what we were doing in athletics, rather than just providing a high-level athletics program.

INTERVIEWER: You mentioned that you were director of athletics when the new Zesiger Sports and Fitness Center opened. Tell us about that and what it meant.

ROYER: Let me tell you to me, a little, funny story about that. When Royce Flippen was recruiting me in 1981 to come to MIT he actually said, you know, in just a couple of years, Candace, if you come to MIT, your office will be in one of the state of the art buildings, athletic facilities in New England. And of course, I believed that. And I never doubted Royce. But it took a long time for that to come to fruition. So when Royce came back for the dedication in 2002 I pulled him aside and I said, you know Royce, you're right. I am sitting in one of the greatest athletic facilities in New England. And you almost had it right, you just confused a one for a two. It took an awful long time for us to get here, but sometimes the wheel turns slowly and then it turns in a way that it's beyond your imagination. The Zesiger Center today is a centerpiece on this campus. And we've built some statement buildings on this campus, but I still have people stop me on the street-- and I've been out of that position for four years this coming July. People stop me on the street and tell me what a difference that center has made in their lives. And we try to pass that on to Al and Barrie because without their infusion of funds I'd be hard-pressed to believe that that building would be over there. It's made an enormous difference in student life on this campus.

INTERVIEWER: In what way?

ROYER: Students now want to come there. I had a swimmer tell me, right after we opened the center, she said, you know, Candace, I get in the pool and I love my swim workout now. I get out of the pool and I go to the second floor of the Z Center and I do my land workout. And then she said, you know, I really want to go back down and get in the pool again. It's really hard for me to leave. It's so beautiful. We're keeping it clean. The equipment works, and the people who are helping us to run that center are real high-level professionals.

INTERVIEWER: When you became athletic director you also talked about making changes in both the Phys. Ed. Program and viewing fitness more holistically. What did you do on the fitness front?

ROYER: You know, we put a component into each of our physical education classes that talked about fitness. So instead of taking a tennis class where you go out and you learn how to stroke the ball, hit a serve, or hit a volley, we also spend about 10 minutes, 15 minutes-- it varies a bit-- in each of those classes talking about the physiology of the sport that you're playing. The importance of a warm-up, the importance of a cool-down, the importance of warming up a little bit longer on a cold day. So each of the instructors have been asked to put that component into their physical education classes. That's something we weren't doing even 10 years ago.

INTERVIEWER: And do you think it makes much difference?

ROYER: I do. I think it's like many things, Karen. If you're dieting you have to think about what you're eating. If you're exercising you have to think about what the best way is to prevent injury. And particularly, the post exercise stretching is a really important piece as we age to preventing injury. So I think, yes, the students may not see the connection when they're 18 to 22, but I like to think those little lights will go on later in life when they start to feel more aches and pains after exercising and think, wow, I should be stretching more.

INTERVIEWER: Another initiative during your term as director was to change the image or develop a brand for MIT's Athletics Programs. And you ended up working on this for several years I think with a big committee and you brought in an outside firm, SME Branding of New York, that had clients that included a lot of professional sports teams. So how did this come about? Who decided this was important and what was the process like?

ROYER:

This is an interesting story for me to think back about. How did that start? I wanted to be able to earn or create a different revenue stream for the department. Every department at MIT is always looking for ways to augment their General Institute budget. And I had had some conversations with people on TLO, Technology Licensing Office, about licensing athletic gear and being able to sell it and actually have some of that money flow back to the DAPER coffers. Well I learned that you can't license really a T, because a T for tech is too easily reproducible. It's not distinct enough.

So I talked with this one lovely woman over there. I said, so what do you think? She said, well, you could rebrand and come up something completely different, and then you could trademark it and then, you'd have, perhaps, this revenue stream that you're looking for. Of course, they were all discouraging me that it wouldn't really bring in that much money and I said, well, I don't know. I said, you know, every year I see people go to the Coop on their way out of here and buy armfuls of things. And throughout the rest of the year as well. So that's really where it started. I wanted to see if we could develop a revenue stream. I also thought that the time had come when the students weren't resonating with the T so much-- technology. We do so many other things. For a while people were talking about getting rid of the term engineer because we do so much more than engineering, your present case included. So we decided that we wouldn't leave the engineer moniker, but we needed to create something new and vibrant that the students would really be proud to wear.

For too many years on this campus I saw our students wearing the Harvard H. I really wanted to get rid of that and have them wear something that denotes MIT. So we did form a lot of different committees, well, we had one committee. We visited with lots of different groups on campus. We probably, Karen, went through 15,000 designs. I mean, really, the number of things that-- SME earned every dollar that we paid them. And, I was able to get them at a really nominal cost because they wanted to break into the college industry. So you're right. They had had a lot of pro teams, but they wanted the college market, and they wanted MIT to lead that way. So it was a four- year project. It was enormously emotional. You know, students either loved it or hated things that had come down the pike. And it wasn't until we came upon the swimming beaver that we got everyone on the same page.

So that's our primary mark, the swimming beaver. The full-faced, angry looking beaver is the secondary mark. And we've pretty much moved away completely from the tertiary mark, which was kind of a side view beaver with claws bared. You know, beavers don't bare their claws very much. But anyway, it was a great experience, and the students-- you know when you've made it right when the students want it. And just recently I saw something come across my desk where a club sport wants to make sure it's okay for them to use this-- we want everyone to use this logo. It's a great logo.

INTERVIEWER: Did you have any idea when you started that it would take this long? I mean did SME say gee, sometimes they take three years or five years? Or they said, usually it takes nine months?

ROYER:

I think we took longer than any other school or industry that they helped in the past. This is a highly diverse campus community as you know, and we wanted something that the professors around the table could resonate with, that the students really loved, that everybody wanted to wear. So it just took a lot of time to get everyone on that page, and for them to give us good enough things. That was the other thing. It had to really be a high quality mark. We didn't want something that looked cartoonish, particularly. So trying to replicate a beaver in a non- cartoonish way that looks good on different things-- you know, letter head, shirts, hats-- it's a much larger task than I ever anticipated.

INTERVIEWER: Did the senior leadership of MIT get involved in this or did they just say, go do whatever you want?

ROYER: I involved Kathryn Willmore because she had recently done the MIT binary-- I call it the MIT binary logo. The new mark that we have for MIT that looks like a very binary representation I think. And Kathryn did say, you know, it took a long time for us to get there. And I don't think there was much opposition to athletics doing something else because that's often done on campuses. So if you look at even our Ivy League counterparts, you'll see the athletic department doing something that is representative of Harvard. And actually, I think at Harvard, they have the Harvard seal and then they have the Harvard H. And the Harvard H is the primary mark there.

INTERVIEWER: Did the change, the new image bring in more revenue?

ROYER: It is. It's bringing in revenue. As we've gotten more web savvy, we actually have a website now where you can go to purchase MIT gear. I think it needs to be expanded at this point in time. It's something that I put into place when I was running our own little office of advancement a few years ago. But it's something that I think is very accessible now to people. Parents want it. Students who are leaving to go back to their home countries want it. So we are doing much better. I think we need to market it more certainly, and I'd love to see the Coop sell more of our things as well.

INTERVIEWER: I believe it was you and your department that worked with MIT's health services to develop a wellness course?

ROYER: That's right.

INTERVIEWER: Can you tell us about that?

ROYER: Sure. When Carrie Sampson Moore came on board as our director of physical education, she formed a committee to look at how we might do health and wellness better. We wanted to put that kind of a class into our physical education curriculum. In fact, Karen, at one point we were desirous of having that be one of the points of physical education. In other words, everyone would come through a wellness class. But as you know, you don't have many requirements outside of the GIR in how you fulfill the GIR, so we didn't want to make that mandatory. But we wanted to make it of value. So the idea was to partner with the wellness people at medical and develop a class that was co-taught by medical and to the Department of Physical Education that would meet the needs of the students and the campus community. Carrie worked with Julie Banda and a few others from medical for about two years. We piloted the class during an IAP and it has become one of our more popular classes now.

INTERVIEWER: Among the--

ROYER: Among the students.

INTERVIEWER: --the undergraduates.

ROYER: And we also have some staff taking it. But among the undergraduates. And they speak very well of it at the end of the class, so we feel pretty good about that health and wellness class.

INTERVIEWER: Were there other highlights from your term as director that you think were important?

ROYER: I think the development of a sincere spirit among the students for their sport was something that we worked very hard to develop. We have a group called the Student- Athlete Advisory Committee, the SAAC, and working with students from various sports to develop an esprit de core across the sports program I think, was something that I'm very pleased to see happen. Our student athletes are very supportive of each other. If you go to a basketball game and look around you'll see students from other sports. Same thing with a volleyball game. The spectator sports, I think, enjoy that crossover much more than the individual sports where it's very difficult and time consuming for an MIT student to come to a four-hour tennis match. That's probably not going to happen very often. But I think there is a different spirit and a esprit de core. I think that affects the staff too. So I feel that we're on a really nice course of making sure that people are really enjoying their work as well as working here.

INTERVIEWER: You've had some interaction with alumni. I think both before you became director of the athletic department and during and after. How did that start and is it common for athletic departments to have those kinds of relationships?

ROYER: It is. I think you know as a coach you develop very close and tight relationships with many of your students. And so, long after they leave they'll stay in touch. It goes back and forth both ways. So I think my alumni engagement involvement started there, but also someone who you know well, Bonnie Kellermen, came to me my, probably middle coaching years, and asked if I would do some seminars, some teaching tennis seminars for the Boston Club, the MIT Boston Club. And I said, sure, that'd be great. She said, oh, and by the way, you know, we'll give you a check at the end of it and you can put it into your tennis budget. And I said, even better. Let's do it.

So she created a little revenue stream, actually for me, for my tennis team. But I got to know a lot of alumni, and they me. It was a lot of fun to be out on the courts. I engaged my students in the teaching. So there was some crossover there across the generations. They really enjoyed teaching and playing with these people, so at the end of the teaching session I'd always have the students play some doubles with people who were in attendance. And it actually set a model, if you will, for these Saturday night tennis things that I ran for many years as a way of raising money to do spring trips and other special things that the women's tennis team wanted to do at the time. So it became a feeder program if you will.

INTERVIEWER: What were these Saturday night events?

ROYER: I would run about twice a month, I think, once or twice a month. We were running a seminar where we'd invite people in from the general population at MIT. They were sometimes professors, they were other times professors and campus community folks. And they would come in for a two-hour session of not so much instruction, but just round robin play, doubles play. And then we'd have refreshments afterwards and the students got to know the community and vice versa, and they all paid a fee to do this. So it became money that we'd put aside and into our travel budget.

INTERVIEWER: What do you think drew them in?

ROYER: I think the students. Once the community learned how much fun it was to play with these student athletes it was - we would overbook sometimes. It was just really a lot of fun for them. And you know, weekend players are now being challenged to play at a much higher- level. And I don't know if you play tennis, Karen, but everybody always wants to play with someone better in tennis. That's the way you improve. So this became a very popular event.

INTERVIEWER: And this was the male students as well as female?

ROYER: The men's team didn't do as much of this. There were a few guys who wanted to come in and be part of our program, so of course, we invited them in. But mostly it was a women's tennis team fundraiser if you will.

INTERVIEWER: After you stepped down as director of athletics you became senior associate dean for student life. I'd love to hear about that job, but also how hard was it to step outside of the athletics department after all those years?

ROYER: It was very hard. It was very, very hard. My whole identity I think was as a member of that department. And actually, it still is. You know, I'm fortunate to be a tenured professor here at MIT and my professorship is in that department, so I consider myself to be on loan if you will to other departments. Certainly when I was senior associate dean of student life and now in resource development. But it was hard; I wasn't finished yet. I hadn't quite achieved all of the things that I had hoped to achieve as department head, director of athletics. So it was hard to step out, but that said, what I stepped into as senior associate dean at the request of Larry Benedict was to create a program, a fundraising program that would work not only for DAPER, but ultimately would migrate into DSL and hopefully work for DSL as well. Again, we're always, always looking for ways to augment our budgets so we can provide these great programs for students. And as I thought through this, and it took me six months to make the decision.

Larry came to me, I think, in November of 2005 and I actually accepted the role in March of 2006 because I was so invested in trying to help DAPER float better on its own bottom financially. But this seemed like a good way of trying to do that. So to step into a role where I would create an office of advancement in support of my home department seemed like a great way for me to end my MIT career, so I did it happily after I made the decision. But it was very hard to step outside of it.

INTERVIEWER: Did you continue to teach or coach at all when you made that transition or was it cold turkey?

ROYER: It was cold turkey. One of the reasons I was happy about starting this Leadership Seminar Program was it got me back into teaching. I really hadn't taught and coached since 1995. I really stepped out. I taught a few walking classes when I was director of physical education, but when I became department head director I just found there were too few hours in the day to do my day job and then also be able to teach. That saddened me, but I had to set priorities for myself and try to have a schedule that was somewhat sane. So I hadn't taught in a long time until I started this other class.

INTERVIEWER: What did you actually do in the Department of Student Life, and did you get involved in counseling or any of the student aspects of that department? Or was it focused more on alumni?

ROYER: It was focused more on fundraising. So the strategic planning and the work that I did mostly with Larry and the other senior associate dean, Steve Immerman, at that time was mostly around the fundraising aspects. There were times that Larry would call me in and rely on me for counsel in some other areas, but my primary role as a senior associate dean was to develop this office that would provide additional funds through our alumni through alumni engagement. So it wasn't so much just about the resource development role that I'm playing now, but about alumni engagement and bringing our alumni back to campus and finding significant ways for them to interact with the current programs and the current students.

INTERVIEWER: Was there a certain gap you were trying to fill in the financial financing of the department and had it grown for some reason? In other words, why was it bubbling up then?

ROYER: The program had grown in terms of the size of the program. We were at 41 sports when I left it. And in addition to that, the length of the seasons had gotten longer for most teams, for many teams I should say because they were better and they were qualifying for post-season play. And so all of that excellence had a cost. And we were not in a position to make, I think, the best case for more from the Institute with all of the other competing priorities that we have at MIT. So it seems like the best way for us to make up the difference in terms of our budget deficit was to get out and try to engage our alumni and explain to them both the vision and what's really happening at MIT today, and what the needs are for us to be able to continue to provide these great programs. So that's the mission that I took on, is to try and articulate those things to our alumni. And I have to say, we've met with some success. We still have a long way to go, but I think we're on the right road.

INTERVIEWER: How did you put a program together to do that? How did you proceed? Where did you start?

ROYER: Good question. Larry gave me the privilege of a sabbatical in 2006. So when I stepped out of my role as department head, I took six months and had my first sabbatical in, at that point, 25 years. Part of the sabbatical was about rest, I think, but the other part of it was about visiting our Ivy League peers to see how they do their athletics fundraising. And I wish I had done that a long time ago. It was really, enormously enlightening to see, if you will, the machine that exists at our Ivy League peer institutions around athletics fundraising. Of course, they've been doing it for many, many, many years-- 30, 40, 50 years. Harvard has been at this almost since the time I think that Harvard sports began in some small ways. But I learned things from each of the athletic directors and fund development people that I spoke with on these campuses that helped me put together a rational strategic plan for how we would go about constructing our office and the components that it needed to have to be successful.

So I was in the process of building that program when I got the call to move into resource development central in 2009. But I really loved putting that together because it would have been a program I think that would have served our coaches extremely well internal to the department. I'm now a little more external in terms of the role that I play, but I'm still working in support of DAPER Program, so that's where I need to be I think.

INTERVIEWER: So what were some components of the plan that you did put together?

ROYER: The main thing was the alumni outreach, of figuring out the best ways to bring people back to campus. Whether it was a mentor program with some of our teams and engaging people in the mentor program. We started celebrating our athletic events more, encouraging people. Bob Ferrara who was then working in the Alumni Office really helped us to put together a great program in men's basketball. To invite people back and have them feel more part of the program. We started to really elevate the way that our alumni games would run at the end of each season. So instead of just having a small gathering that wasn't very organized, we elevated that. And trying to have our alumni feel as special returning as it really is to us that they return to MIT. So it was those kinds of sort of grassroots programs that we were elevating I think that over time will make a difference.

INTERVIEWER: All of the reunions have a reunion row component.

ROYER: That's right.

INTERVIEWER: But none of the other sports have that. Do you think it would be workable in other sports or would accomplish anything?

ROYER: I think rowing is kind of a special case. It's one of our very, very oldest programs. It's a program in which alumni have tremendous attachment. I always called it the miracle that happens on the water. These folks, and they were mostly men at the time who have come through the rowing programs, stay engaged, attached, and give back enormous resources to keep that program literally, on the water. So I think the idea of having a reunion row probably grew out of-- 25 years ago-- grew out of many of those alumni coming back and saying you know, we really should do something. So again, it's student initiated, except the students in this case are older alumni. Will it work for other sports? I think it is.

I think many of our post- season alumni games now are attracting more people. I think instead of it just being an hour and a half on a Saturday, many of the alumni come in on Friday night and they have a gathering on Friday nights, and then they play the game on Saturday, and then have a post game barbecue. So I think the alumni attachment to the programs is getting stronger.

INTERVIEWER: Are the giving records for alums very different depending on whether they were in varsity or in clubs sports or intramurals?

ROYER: We see very good numbers with the varsity sport athletes. Most particularly, in the way they give to the Institute in general. If I looked at our giving numbers for former student athletes, they actually give to the Institute at a rate that's 4:1 to athletics. And that's a very interesting statistic. I think there's a very close bond that develops to the Institute through playing a sport. Of course, they do other things as well. And there's a huge crossover between men particularly, who play a sport, and men who are in fraternities. And that's gone on for a very long time. So it's a little hard to say is this the primary causation or not? I don't know that, but we do see good numbers from people who were former athletes.

INTERVIEWER: Run that 4:1 past us again. What does that represent?

ROYER: So basically, an alumnus who was a varsity sport athlete, gives to the Institute at a rate that is 4:1 to what they give to athletics. Four times.

INTERVIEWER: In other words, they're four times more likely than non--

ROYER: They give four times more dollars.

INTERVIEWER: Four times more dollars.

ROYER: Than they give to their sport.

INTERVIEWER: Does any of it have to do with whether they're in a position to give more because they're wealthier, or is it just that they are so connected or feel so deeply that they're willing to give more?

ROYER: You know, that's another very good question. I don't know, but I'd recently had a call from a lawyer who was trying to make the case that athletes earn more money in their careers, their life long careers than non- student athletes. She asked me if I had any data on that. And I said, I wish I did. The only data that's ever been tracked that I know around that is for pro- sport athletes, and we all know what they make-- a lot of money. But that's less than 1 percent of the whole varsity population in this country. But it's not been studied, and I don't know what the answer is for MIT.

INTERVIEWER: How supportive have the MIT presidents that you've seen been of sports and athletics and so forth? I think Paul Gray played squash. He may still, I don't know. And Chuck Vest ran. And I don't know whether Susan Hockfield does some kind of sport or fitness training, but what did you see during their different presidencies?

ROYER: I think they've all been very good partners for us. Paul and Chuck certainly I'm more familiar than Susan in that regard, I worked for them much longer in roles where I was constantly sort of interacting with them. But I think they all understand that sport has an important role to play here. And certainly Paul, he has played squash-- he told me the other day, for 50 years at least once, if not two or three times a week on this campus. Chuck ran every day. Susan started to play tennis here. Now I don't know if she's been able to continue that because her travel schedule is just-- it's amazing. I don't know how she does it all. But at any rate, I think they all understand it.

Susan has been especially attentive, I think, to coming back or coming out to student events. I often see her at student events. And when we get further into for example, our men's basketball team made it into the round of 32 I think this year. Last year they made it into the round of 64 in post season play. She came to those games. And one of them was down on Rhode Island, so she had to travel. But for the students to see her there, both the student athletes, as well as the students who came to support the team, it was just an amazing experience for them.

INTERVIEWER: And I guess thinking back one more president, well, I don't know whether Jerry Wiesner-- what his years were like, which was before you came, but Howard Johnson who preceded him has his name on one of the athletic centers.

ROYER: Howard was hugely supportive. Howard was in the seat in the presidency when we started to expand the Women's Sports Program I believe. Just at the very-- when was he here?

INTERVIEWER: He probably stepped down in '71 and there was still only about 50 women a class, so there weren't a lot of women then I believe. I think maybe they turned the dorms coed in 1970, which began to open up room for more women to come. But I don't know how fast they moved on expanding the women's-- well, you were there.

ROYER: Yeah, I was thinking-- first of all, Howard was a terrific mentor for me. I got to know Howard well when he chaired the Athletics Department Visiting Committee. I was serving I think in a variety of administrative roles during his last few years as chair of the visiting committee, so I got to know Howard pretty well. And he was very supportive, and he was very wise. And Bob Roberts told me a story not too long-- am I saying the right name? Professor in Sloan told me a story about--

INTERVIEWER: Ed Roberts?

ROYER: Ed Roberts. Thank you. Just recently about how Howard was really compelled by a story that Ed had told him about women and not having access in athletics too-- at least at the Institute on a path of developing the women sport side of things. Including the physical education requirement for women. So if you get to interview Ed ask him to tell you that story. It was a really good story. So that's kind of why Howard is in my mind about this.

INTERVIEWER: Was Howard an athlete or did he participate in a sport, or was it more a recognition that this was important even if he didn't participate personally?

ROYER: I think the latter, Karen. I never remember seeing Howard exercise or having him talk about it very much. I think he and his wife were avid walkers. And they may have done a little sailing, but I don't remember him actually sort of saying I have to leave this visiting committee at this hour because I need to go work out or something.

INTERVIEWER: It's interesting though that he ended up chairing that area given so many of the people who get involved in the visiting committees and the support do it in part because of their own personal experiences.

ROYER: I think that's true. I think Howard though, was a very good listener. And students were beginning to report, even back then, how important this aspect of their life was and I think he really wanted to be a champion for it.

INTERVIEWER: You took on the fundraising position or moved into resource development, I guess, after the financial markets had crashed. And MIT was making cuts in lots of areas, including in the athletics and the varsity sports. And there was that very strong backlash from some students and alumni over those cuts. Were you running into a buzz saw trying to raise money for sports at that time, and do you see any lessening in the hard feelings now?

ROYER: Timing is everything, isn't it really? Yeah, it was probably not the greatest time to move into resource development in some ways, and yet, it was the very best time to move into resource development. I played a role with Julie Soriero, our director of athletics department head now in talking with a lot of parents and alumni about the sports that had to be cut. Being in the role that I was of fundraiser has made it difficult for some of those sports. And interestingly, even people whose sports were not cut have strong opinions about the sports that we cut, or even having to cut sports. So yeah, it has been difficult. I've run into many alumni who have opinions that they are willing to share with us about that. But I think that because we've been able to support all of these sports at a club sport level, it has helped a little. And we've had some wonderful champions.

Paul Radovsky in golf really stepped forward and helped us articulate to our alumni in golf how this was going to be almost as good if not better. For the students it's proven to be a really good move-- the club sport golf-- because they're now actually playing against our peer institutions, academic peer institutions, where they hadn't been before. So they're actually, Karen, playing a higher- level of golf than they were playing as Division III athletes. The trick is going to be to support it at the level that needs to be supported. And so the conversation that I'm having with golf alumni is look, this is a good thing for the students. They're having a high-level golfing experience. They need your support. Can you help us because clearly there's not as much money available yet on the club sports side to support all of these varsity sports that have popped back up. So that's the new challenge now, is to find ways to support the former varsity sports as club sport so that they can continue to compete and enjoy the sport.

INTERVIEWER: With universities facing financial pressures and to some extent, looking at less funding from government sources, they've increasingly turned to endowments for things to put money in the bank that you can draw on for years after. Some universities have begun to endow coach positions for example. How much is MIT going in that direction?

ROYER: We are definitely going in that direction. In fact, I've had several conversations in the last two years with Julie about this. I referred to the strategic plan that I developed for the Office of Advancement. The three primary areas that we're trying to raise money for are capital projects needs, endowment, endowment of coaches' positions actually. And then, the annual fund. And all of those have to happen concomitantly for Julie and for the department to be able to satisfy at a good level the needs and the expectations of the students.

So the Alumni Association at MIT now is playing a larger and larger role in helping us with the annual funds piece of that. I'm pretty much out of that piece of it at this point. And I'm trying to do the work on the endowment side and the capital projects side. So yes, we would love to see that happen. We need some rather large gifts to make that happen. A head coach position today is about a \$2 million endowment proposition. I think our academic faculty are up to \$3.5 and moving higher. It won't be long before the faculty positions, faculty-coach positions in DAPER will probably be a \$2.5 or greater. So it really is in our best interest, I think, to do this work through the endowment because, quite frankly, to try to plan a budget without money that you can count on is a pretty difficult task to do.

INTERVIEWER: Are there any coach positions that are endowed yet?

ROYER: There are. The Mary Frances Wagley head coach of swimming and diving is an endowed position. We have one position that's fully endowed in crew and four more that we're putting money into. So we're hoping we'll soon have five positions in crew that are fully endowed. And really, it needs to be more than budget relieving, you know, it needs to be budget enhancing. So we need to do a lot more work on that side of things.

INTERVIEWER: Did Mary Frances swim or dive or was this another just recognition that this was important, and so she stepped forward?

ROYER: You know, like Al and Barrie, they were not competitive swimmers. But swimming made a big difference in their lives. It provided their relaxation, it provided their cardiovascular fitness. And Mary Frances reported the same thing to me. Until this year I think she had swum several times a week. When she was at her home in Florida she actually did ocean swimming, and so when she thought about doing something major for DAPER, for the Department of Athletics, she decided that that was where she wanted her endowment to go.

INTERVIEWER: I imagine it's easier to track down the alumni from different varsity sports for example, because you have lists of them from the past?

ROYER: We do.

INTERVIEWER: But to identify graduates who played club sports, is that harder? And then, to identify alumni who maybe didn't play the sports at all, but have an interest the way Mary Frances did, is harder still? How are you going about it?

ROYER: Well, I had my seat in the chair in 2001. That's when I began. In 2002 I realized that we had a financial problem to solve, so what I began to do at that time was look across the department for opportunities. To make sure that we were tracking all of the people that needed to be tracked. We started to code-- that's the way people are tracked here, right? We started to code club sport athletes at that time. We have a pretty good list at this point of club sport athletes who we can get in touch with and they are giving back to their club sports. Not certainly in the numbers that we need, but we have to remember, most of those students are graduate students. And the main pull for people tends to be to their undergraduate institution. So we have a bit of work to do in that area.

INTERVIEWER: Well, good luck on that front.

ROYER: Thank you.

INTERVIEWER: And thank you very much for talking to us today.

ROYER: Thank you for the privilege. It's been wonderful. Thank you so much.