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**Interviews of the Margaret MacVicar Memorial AMITA Oral History Project**

**Antonia Schuman**– Class of 1958

(interviewed by Natasha Balwit)

June 8, 2013

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BALWIT: I thought maybe we could start with your telling me a little about where you come from, your background, how you got to MIT.

SCHUMAN: I was born and grew up in New York. My father was something of a renaissance man. He was in the advertising business. My mother wanted me to be a girl. That wasn't that easy because I had electric trains, and I didn't like dolls. I was clumsy, and I liked to tinker. It was very obvious that I wanted to be an engineer. Well actually, I wanted to be a particle physicist. But this was in the fifties when there were only three particles. It was really easy when you only had protons, neutrons and electrons. Now they've got quarks and all this other stuff. The Higgs....I didn't even know what a boson was. So I got to MIT and physics was really hard; I almost flunked 8.01, and mechanical engineering seemed easier...except for thermodynamics.

BALWIT: Did you feel like you had encouragement to come to MIT?

SCHUMAN: My father thought it was just fine. My mother thought I had two heads. All my high school classmates went to liberal arts schools.

BALWIT: There weren't very many female engineers back then?

SCHUMAN: Oh no. I mean, it just wasn't *done* in the fifties. If you had a career you were going to be a teacher. You could be more than a secretary, but it was just not done.

BALWIT: What kind of reactions did you get from the people in your life?

SCHUMAN: I went to a very progressive liberal school in New York. We were encouraged to follow our passions. I was very lucky in that regard.

BALWIT: So you ended up here. What did you think when you first got to MIT?

SCHUMAN: I'm home. Then I realized that everyone else was smarter than me. It was very humbling.

BALWIT: It's amazing. Do you have any stories you especially want to tell?



SCHUMAN: Well, there are a couple of things. This didn't pertain to me particularly, but MIT is a land-grant school, and as a result, ROTC was mandatory. It was mandatory, I guess, up until some of the protests during the Vietnam War. All the guys had to take ROTC. We had one girl who was a licensed pilot. Seventeen years old and she was flying airplanes. She wanted to be in the Air Force/ROTC, and they wouldn't let her. It was just for boys. So she had to petition, and they let her take the class, but they wouldn't give her a uniform, and they wouldn't let her do any of the marching and stuff like that. Now most women officers in the military come through ROTC.

The other thing was athletics. It was mandatory for men. But it was not available, and actually forbidden to women. I was a jock in high school. I was trying to say, "Okay, let's have some sports." I petitioned MIT to let us have athletics. They said, "Girls don't play sports." I was really pushy, and they finally said, "Okay, you can use the basketball court on top of Walker Memorial." You know there's a basketball court up there? And I said, "Well, can we have a ball?" I couldn't get twelve girls, enough of us to make a basketball team. I gave that one up. Now, physical education is mandatory, right?

BALWIT: Yes, you have to take PE or do sports to get your PE credit.

SCHUMAN: And then Title IX made it very, very good, so women could compete, and we have varsity sports. That's among the great changes since I was a student.

BALWIT: Have you noticed other major cultural differences?

SCHUMAN: There are a lot of things. Probably it'll come to me. I'm a little senile.

Back then, when you walked down the hall through the infinite corridor, and all you saw were white men. Now, the diversity is amazing, and I see all these girls. *Fabulous*. All the girls back then knew each other. There were sixty women undergraduates. Today you can't possibly know all your classmates, let alone all the other female students. It's a co-ed school now. I love it.

One of the things that I think has been so marvelous about MIT is the emphasis on humanities. There used to be a joke, when we were here. In fact, the unofficial motto on why we had to take humanities was, "*MIT builds whole men.*" I say, "See, I turned out okay. I'm a whole man." The choices that we had then were very limited. Now, we have a whole department--all of the music and theater arts, literature, history and languages. That's one of the great things about MIT- you aren't going to



do just engineering or science for your four years. I forget, what was the question?

BALWIT: Oh, I just want to hear in general about your experience at MIT.

SCHUMAN: Another thing, I was very active and very involved in leadership roles, like being president of the women's dorm and the Association of Women Students and I sat on the UA and was a member of several committees. My junior year or maybe senior I decided to run for vice president of the Undergraduate Association. There'd never been a woman. It was kind of a doomed campaign, but I didn't care. My mother had saved a copy of the Tech with the pictures of all the candidates for president, and I found it just about a year ago. There was me looking 19 years old, and saying why you should vote for me. I think I got ten votes.

Now women have been in just about every leadership role on campus. We've had a university president who was a woman.

SCHUMAN: Tell me, why did you pick MIT? Or did I ask you that already?

BALWIT: People always ask me why I ended up here, because it's kind of a surprising match. When I first came, I was really interested in biology and writing. I've always loved science. I write, too, compulsively. I write all the time. I wanted to be able to write about science in a way that would make it accessible to a lot of people, in a way that would also have literary value and be beautiful. So I figured, I'll practice writing, and then I'll come here to learn science.

SCHUMAN: I'm on the visiting committees for the Department of Social Sciences and it's amazing how great the program is. Is that your major?

BALWIT: 21W, specifically. I took the best writing class of my life last semester.

SCHUMAN: That's great to hear. So have you told Deborah and the people in the department?

BALWIT: Deborah?

SCHUMAN: Oh, she's the head of SHASS. Deborah Fitzgerald. What was your favorite course?

BALWIT: It was with a guest professor, Ta-Nehisi Coates. I loved it.

SCHUMAN: That's wonderful.



BALWIT: Yes, it was. So, what did you do after MIT?

SCHUMAN: I graduated in '58. My husband was at the Harvard Business School, finishing up his MBA. He graduated here the year before me. I worked at the Boston Naval Shipyard, which is now offices and condos, but it was a working shipyard then. I'm a mechanical engineer. I did my thesis in fluid mechanics, and so working for the Navy was the perfect thing and I worked there for a year. I sat at this enormous drafting table (it was before computers or anything else), drawing painful lines, laying out all this plumbing. I remember thinking, God, I got my MIT degree so I could be a plumber? Pretty much that's what I did.

I eventually ended up as a programmer on big old main frame computers. And when I became technically obsolete I went into management and marketing, mostly building automated systems for the military.

BALWIT: It sounds like you've done a lot of work in fields traditionally dominated by men.

SCHUMAN: I'm sure your generation won't have this problem but women in my generation were outsiders in the technical world. I would show up in a meeting, at a technical society event, or even in my workplace and they weren't sure what I was or why I was there. And of course the men expected me to fetch the coffee and take notes

A typical experience was in the mid-sixties. I was a programmer and the head of the department left. Our boss called me in to say that of the three candidates to replace this man, I was the best. I was the highest-rated. I was doing the best work. But they weren't going to give me the job because I was a woman. Again, this was 1964, 1965. You wouldn't hear that today. It never occurred to me to fight.

BALWIT: How did you deal with setbacks like that?

SCHUMAN: I said, "Okay." It was a choice: do I make an issue of it? I needed the job, which I enjoyed, and it was near my house. I had little kids, and I could get home and see them and feed them. In fact, I was nursing at the time, which made it a little difficult, but that's how people thought in those days. A number of women had enough strength to fight it. I'm afraid I wimped out.

BALWIT: So you met your husband here?



SCHUMAN: Yes. That was my first husband. He's been long gone.

BALWIT: And then you had a family.

SCHUMAN: In 1959 we moved to California. I had grown up in New York, so anything west of the Hudson River was Indian country. Now, of course, you grew up on the west coast, and it was civilized. I didn't realize that.

BALWIT: You thought it'd be like the Wild West?

SCHUMAN: Of course. Typical easterner like me, from New York City has nothing but prejudices about the rest of the country. I got there assuming it would be temporary. It took me two years, but it was July, and it was cool, and I was planning a picnic. I said to somebody, "Isn't it going to rain?" They said, "It doesn't rain in the summertime." I was going out, dressed like this in light clothing, no snow in the winter, and fifty years later--you have to like wherever you are. There are people who, if they grew up on either coast and they found themselves in the middle of the country, in Kansas or something, I mean, they're miserable. They're making themselves miserable. There's beauty wherever you are.

BALWIT: What was it like, growing up in New York back then?

SCHUMAN: It's all I knew. I grew up in an apartment. I took the bus or the subway everywhere I went, starting when I was about seven or eight. I thought everybody had theaters and museums and a wonderful park. I spent summers at camp, so at least I got out of the City, but that was just eight weeks in the summer. But it's a great place to grow up.

BALWIT: Do you have any favorite stories, fun memories?

SCHUMAN: Back in the 1950s mechanical engineers had to have a lot of hands-on experience. So we had to do a machine tools lab, foundry, welding - all these really neat physical things. I really loved it.

Other things that I remember fondly are silly, like freshman-sophomore rivalry and field day, fraternity parties, lots of formal events, being with people who didn't think I was a freak. And especially the way MIT cared about students.

Most people are not mad scientists, working in a lab all by themselves with the white coat and stuff. You work on teams. MIT really understands the team concept, which I really think is fabulous. Sitting on the Visiting Committee for Mechanical Engineering--you don't know about visiting



committees yet, do you? Anyway, we get to hear how the kids have embraced this. This is what MIT is. We cooperate. It's a team thing.

Outside, people think MIT is all cut-throat, dog eat dog, half the class is going to flunk out. It's the other way around. If they admit you, they'll make sure you graduate. Your class had a seven percent admission rate. That means of everyone who applied, only seven percent were made offers. You're in the top elite of the world, and your class also had a mean SAT about 780. You're probably one of the ones who raised the verbal, but the composite of verbal and math was 780 out of 800. Not only do we have an enormous number of people want to come here, but of the offers that we made, about seventy percent said yes. As you can tell, I'm very enthusiastic about it. You had an interview?

BALWIT: I loved my interview. I had a great interviewer.

SCHUMAN: That's like twenty percent of the reason you were admitted. The interviewer learned thing about you that MIT couldn't learn from your SAT's and your transcripts. They're also salespeople for MIT. I've stopped doing that because I've just been gone so long. If someone said, "*What's it like to be a woman at MIT?*" I can't tell them. It was a different world.

BALWIT: You interviewed for thirty years, you said?

SCHUMAN: Oh, more than that. I just gave it up a couple years ago. I realized that my grandkids were old enough to go to MIT, and I really shouldn't continue. But I loved meeting these brilliant high school seniors. You have to stay cognizant of what's going on here. It's a way to stay connected. Every summer I give a big party in my backyard for all of the MIT kids in Southern California. I keep telling people, not only are these absolutely normal teenagers, they're so articulate, and they're so smart.

Most old people are cranky about the next generation. These students are going to save the world. You're going to be one of them. In my class we had a lot of nerds. East Campus was all boys. Every dorm was all boys, but East Campus was particularly nerdy. I mean, these are the guys who were in their rooms doing problems sets all night long, and they'd come to class. If you sat next to one you weren't too happy about it because they were wearing the same smelly sweatshirts that they tucked into their blue jeans for weeks. 10-250 was the big physics lecture hall. I'd see one of these guys coming up the stairs, and I'd know he was going to sit next to me because there was only one empty seat. Now you don't see those kind of people around here very much.



BALWIT: Where did you live on campus?

SCHUMAN: There was a women's dorm--this was long before McCormick was built--on Bay State Road where I lived for two years and there was only room for 19 girls. We got to know each other really well. It was over a mile from school and in the middle of winter we had to walk Bay State Road and Beacon Street. All the fraternity boys would be standing there hitchhiking. The girls were not allowed to hitchhike. It was a very cold and miserable walk over the bridge.

BALWIT: It's a long walk.

SCHUMAN: But Mrs. McCormick was very close to women at MIT, and she created the taxi fund: if it was raining or snowing or below 32 degrees, we could take taxis to school. It was very nice. We didn't use it all that much, but we knew it was there if we needed it. Once the McCormick dorm went up, MIT was able to increase the admission rate for women. There were 16 girls in my class. And now, 450?

Going back to sports inequality; I had been a jock in high school and the lack of sports here was very frustrating. I loved sailing, and somehow I wandered down to the sailing pavilion.

I had no problem qualifying for the little card you receive when you pass all the tests. Jack Wood asked me, "Do you want to sail competitively?" I said, "Yes, it's a sport, I guess." Sailing is the only sport in all of college athletics where women compete against men. You don't see women playing football or even basketball with men. There's no physical contact in sailing. It's an intellectual thing. So I was on the sailing team. I have the first varsity letter ever given to a woman at MIT. That was kind of neat. I've been involved with the sailing pavilion ever since. Have you been down to the sailing pavilion? How beautiful it is?

BALWIT: It's gorgeous.

SCHUMAN: That's new this year. We dedicated it in May. Up until then it had been as it was since it was built, back in the twenties. It was just falling into the river. It was awful. There was no place to change. I'd go down in my skirt and bobby socks to change into wet gear, and there was no place. I'd do it in the little cube of a ladies' toilet. But the top sailor in New England was a woman from Tufts. I raised a lot of money, and I gave bit for the sailing pavilion renovation and they let me name a new boat. If you had to come up with a name for a boat in two weeks what would you do?



BALWIT: I'd have no idea.

SCHUMAN: I wanted something fun and finally picked "*Buoy Toy*. I thought it would make people smile. All the Fireflies are different colors and for some reason mine is pink. Anyway, if you ever get down there, look for a pink Firefly number 19 with my name in it. They named a regatta for me a few years ago. It's the "*Toni Deutsch '58 Trophy*," (my maiden name). The regatta is sailed in the fall for women sailors in New England schools.

BALWIT: What's your life been like since MIT? You've stayed connected.

SCHUMAN: I worked, I had two kids, and I've got four grandchildren. I volunteer in lots of places. I had a very successful career which I totally enjoyed. I have almost three million frequent flyer miles. I did a lot of traveling on business.

I guess I stay connected to MIT because I'm so grateful. It was a very important part of my life. Whenever I come on campus something happens. It's a transformation. I start to cry, almost. There's something--it doesn't change, and yet it's always changing. You come up the steps of Building 7, and you just start walking. It's like I was back as a freshman. It's all the same. They've added all these buildings between East Campus and the main complex. The Green building went up, another building went up, then another. The artwork that went in was marvelous. They pretty much filled in this area that was all empty. Burton Conner was here then. We didn't have New House, or Next House. Baker was brand new. Now it's 50, 60 years old. They had just built Kresge and the Chapel. There was a lot of controversy because Saarinen was this very far-out architect. So was Aalvo Altar who built Baker. The symbol on top of the Chapel, people were saying it was a crab claw, making all sorts of awful...

BALWIT: I think the Chapel is beautiful.

SCHUMAN: Isn't it? There's something very awesome about it. It's quiet. I can go in there any time if there's not a service going on, and just sit there. You don't have to have any religion. There's still something about it.

BALWIT: It is really beautiful. Are you religious?

SCHUMAN: Not religious. I have a religion. I'm Jewish. But I don't believe in being fanatic about religion. I think it's a very personal thing. Yes, there probably is a god. And if there isn't, there's something of equal magnitude that we can't explain. You go, "Why, if there's a god, are people killing each other?" I can't explain that. I think a lot of people, even agnostics or atheists, believe in some other power. How about you?



BALWIT: I'm kind of figuring it out. Or trying. I went to church occasionally, growing up, because all the kids did in my town, but I was raised Jewish. We celebrated all the Jewish holidays until my great-grandmother died. I meditate, and I like to read a lot about religion. I believe, like you said, there are all kinds of things we don't know.

SCHUMAN: But I really think that our philosophy should be good. Do good. I keep thinking that we need to leave the world better than we found it. Or at least not muck it up too badly. People who are selfish, I just don't understand. Why the, "It's all about me?" It's about all of us. We share this planet with nine billion people. I try very hard to be good. "Good" is hard to define. If I squash a bug I feel good about that, because I don't like bugs except for the good ones. Some of the ladybugs are good, some are not. I just try to not hurt anybody.

As I said, I raised two fabulous kids, who are raising some fabulous grandchildren, and you sort of leave the world with people who are going to carry on. I don't believe in forcing my beliefs on anyone else. I object to those evangelicals who are out saying, "If you don't believe in 'X,' you're going to hell" or "I'm going to kill you because you don't believe the way I believe." That's not religion. That's evil.

BALWIT: It's like you said earlier--it's hard to be good when you don't know what "good" is, when there are so many definitions of "good." Your mom probably thought it would have been good for you to just be a girl, like girls were supposed to be then.

SCHUMAN: Yes, but she wasn't pushy. I was clumsy so she enrolled me in dancing lessons so I could learn ballet. Whenever we had a recital I was in the very back row because I was so clumsy. But my mother still wanted me to be myself. She would try to get me to buy nice girl clothes. Shopping was not my thing, but my parents were very good people. My brother was more of a writer. He was the literary one. I was the mechanical one. We sort of switched roles.

BALWIT: What was your family like? Was your brother older or younger?

SCHUMAN: Younger. He went to Dartmouth, but he was killed. My parents were very cosmopolitan. Their circle of friends was the intellectual elite in New York, so they would have dinners, all these things you read about, in New York in the forties. It was dinner in my parents' house. As kids we were allowed to sit in the living room before the dinners, listening to all these people talk. Museums were just a regular part of our lives. Reading was essential.



Theater, ballet: these are the advantages of growing up in New York. I had a very good childhood. What else could I tell you? I'm not used to talking about myself. You've probably noticed.

BALWIT: From all those years of interviewing students for MIT?

SCHUMAN: Well, that's part of it. The objective, as you remember, was to get the student to talk. I had a whole series of questions that would sort of force them to think.

BALWIT: Have you stayed in touch with any of the students you interviewed?

SCHUMAN: Funny. There was one boy who would come back every year to California and say, "I've got to tell you how it was!" He was one of the most enthusiastic people. I give this party every summer. This last summer there was a woman whose son or daughter was an entering freshman. She said, "You probably don't remember me, but you interviewed me, and I came to this party as an entering freshman." It made me feel good 25 years later. When you go home for the summer, make sure you contact the guy who interviewed you. Was it a man or a woman?

BALWIT: It was a woman.

SCHUMAN: Talk to her; give her a report on your first year. She will be thrilled. I love to hear from the kids when they come back. It will also help her, interviewing the next generation of kids.

BALWIT: Yeah. When I met her I had no idea what MIT would be like.

SCHUMAN: That was her job, to encourage you. What else can I think of? I know that when I got to California, this had to be in the late sixties, I got involved with the MIT club of Southern California. You sit in all these chairs and work your way up to being vice president of membership or something, and then first vice president, and eventually you become president. Well, the year that I would have become president the local club leadership was comfortable with that. But the powers that be in Cambridge said, "We've never had a woman as president of any of the clubs." They decided that they were going to put up a man who had never been involved in club leadership but was famous. It was the first time there was ever a contested election and I got elected. That was in the late sixties. There was, even then, some feeling about whether it was proper to have a woman in a position of power.

BALWIT: You've done a lot of traveling, you said?



SCHUMAN: For work and pleasure. One week out of every three I was on an airplane for business. In those days you got food on airplanes. Dinners were not the best in the world, but I did get to see large parts of the world.

BALWIT: What has your work been?

SCHUMAN: I spent a few months as an engineer doing all those plumbing systems. I was doing my calculations on a slide rule, which is something you've never seen. My boss said, "Go talk to Ed. We're going to get this whiz-bang machine, and maybe he can help you with the math." I talked to Ed, and he said, "Oh, sure," and he pulled out a coding sheet. Back in those days, a computer filled a room --you've probably seen the pictures, with the spinning tapes and flashing lights. They took lots of air conditioning, to keep all the tubes cool. We didn't have any fancy software like operating systems or word processing, or games...all the stuff you're used to. Programming in those days was step-by-step. It was like doing puzzles. If you like crossword puzzles or jigsaw puzzles that's what programming was back in the fifties. I got hooked. I got into computers, and then I got into computer design.

When you become technically obsolete, you go into either management or marketing which I did early. From the early 70s I spent my life running big projects where I couldn't do the real design work, but an engineer would come to me with a crazy idea, and I'd say "You're bullshitting me, you know that won't work." You can't put two screws where they're going to hit each other. You have to move one screw up a little bit. Or an engineer would tell me, "We're going to make that out of some un-obtainium." "Well, where are you going to get the un-obtainium?" I'd ask.

BALWIT: One of the things people learn here is how to work in groups, how to work on a team. What do you think were some of the most important lessons you learned here outside of class?

SCHUMAN: It's exactly that. "Being nice" is too Pollyanna. It's respecting other people. It's the attitude of "I have the answer, but you may have an equally good answer," and "I owe it to you to at least listen." Not to close my mind, to think, oh, she's a kid, what does she know? It's being open and accepting to new ideas, other people's ideas. Some people have huge egos, but they can't solve all of the problems themselves. That's one of the beauties of MIT. You come out of here knowing that.

You may have come here at 17 thinking you knew everything. Most people who come here were either first or second in their high school class, or at



least in the top five. The hardest lesson is that half of you are in the bottom half. I was a chemistry whiz in high school, and I never got less than a hundred on a test because I did all the optional questions. 130 was my average. I come to MIT--do you still have Friday morning quizzes? Every Friday morning, from nine to ten in 3-440, I even remember the room. It went chemistry, physics, and alculus, all through the year. The first one was chemistry. I got a 30! I thought I'd slit my wrists and get on the next train back to New York. What am I doing here, I wondered. Turns out the class average was 40. But it's the biggest shock any freshman has, coming here, to realize all these guys are at least as smart as I am, and many of them are a lot smarter. That's okay. Tell yourself, "A very tiny percentage of the people who apply to MIT are offered admission. And I'm one of them."

BALWIT: It's incredible. We're getting to the end. Are there any last reflections you have, or stories, or advice?

SCHUMAN: Do good. Enjoy every moment of your time here. These will be some of the most memorable years of your life. Drink heavily from the fire hose. Try everything that interests you. It will infuse your whole life. There's something about coming back here year after year. It's an atmosphere that envelops us. And you'll see the 50-year+ alums all in our red jackets, all the reunion people.

BALWIT: Are there a lot of girls here from your class at the reunion?

SCHUMAN: There are three, which is amazing, because only twelve of us graduated. There are 670 living alumni in my class. We have maybe 60 men at the reunion. That's ten percent of the men and twenty-five percent of the women. You bond with the other women.