

**Interviews of the Margaret MacVicar Memorial AMITA Oral History Project, MC 356**

Massachusetts Institute of Technology, Institute Archives and Special Collections

**Carol Hooker** – class of 1967

Interviewed by Eden Solomon, class of 2020

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## Margaret MacVicar Memorial AMITA Oral History Project

Carol Hooker (SB Chemistry '67) was interviewed on June 13, 2017 by Eden Solomon (SB Computer Science '20) at the Kendall Hotel in Kendall Square, Cambridge. Hooker was a biochemist at Eli Lilly, a pharmaceutical company, for 30 years, and has had a life-long interest in computers. She has spent her volunteer time supporting the computer needs of various groups, including NAMI (the National Alliance on Mental Illness), Marion County [Indiana] Master Gardeners, and the Association of MIT Alumnae [AMITA, which funds this oral history project].

SOLOMON: Can you tell me about where you're from and what your family was like?

HOOKER: I was born in Bridgeport, Connecticut. I lived – until going to school, actually – in Texas. My father was from Mississippi and Texas, and he met my mom when he got out of the service on the East Coast, in Connecticut. He went to work at General Electric, where they met. We moved to Texas after I was born and spent five years, until I was in kindergarten, in Texas. We then returned to Connecticut, and I lived in Stratford Connecticut, then Milford Connecticut until going to college.

SOLOMON: What was your family like, in terms of their interests?

HOOKER: My mom never finished high school, so I would be the first to go to college in the family. My dad had taken a couple of college courses when he worked as kind of a supervisor in the GE production lines; that's when he met my mom. He took night courses in engineering but never got a degree.

I have one younger brother, eight years younger. I used to babysit him. I'd say we were middle class. My dad was certainly more educated than my mother, and ended up in an engineering job at Sikorsky Aircraft. When they moved to Arizona he worked for U-Haul, in the testing area. He had patents – at least two, one for trailer hitch testing and one for a ramp assembly. I discovered this only after he passed away. I was doing a search for my maiden name, and saw that my father had patents when he worked at U-Haul – which was a delightful surprise.

SOLOMON: You mentioned this a little bit, but what were your parents' occupations? Your mom – did she work outside the home?

HOOKER: She did. When we lived in Texas, there was a large paper mill nearby. She worked as an employee on the manufacturing floor. My dad, I think, at that time was perhaps working with his brothers in a family plumbing business. It was when we went back to Connecticut that he took some basic college courses in engineering and did more white-collar, as opposed to blue-collar, jobs.

As I remember, my mother did not work when I was in grammar school and high school. However, it never occurred to me until years later that she went back to work after I went to college – in a production-line sort of job. It never occurred to me why she went back to work: it was because of having to pay my college, I'm sure. However, this was never mentioned to me.

SOLOMON: Was there anyone in your family or immediate friends who influenced your interest in your eventual paths?

HOOKER: I think it was primarily my dad. He was always tinkering, always wanting to build things. When he retired from Sikorsky, they moved to Arizona. They have swimming pools everywhere there. Well, he decided he was going to create a motorized device that would cover their pool. He said, "I could build this myself" and sometimes it actually worked. I remember thinking as a kid, "I want to be an inventor," so that was a big inspiration.

SOLOMON: Did you have any teachers or classes you took in high school that influenced the way you changed your path, or formed your path through college and your career?

HOOKER: I was just talking about this over the reunion [the class of 1967's 50<sup>th</sup> Reunion, June 2017]. I seem to have chosen paths as a function of eliminating rather than choosing.

I loved math, up until calculus, and never understood really what a job would be in math, except for teaching – and I thought that I would not want to teach at all. So in graduate school, when we were graduate assistants, we had recitation classes where we had to teach, which I thought would be horrible. I loved it. I kept at least one lesson ahead of the students so I could answer their questions. I think that was satisfying. I eliminated math, physics and humanities, but I wanted to major in a science! That left me with chemistry. So I'm afraid it wasn't out of joy for chemistry that I chose that field, although I did like my high school chemistry teacher.

SOLOMON: What made you want to go to college? Was there any question of whether or not you would end up going?

HOOKER: No, there wasn't any question. I was valedictorian of my class, and I think there were, I guess, what would be considered accelerated classes. I always went to public schools. Everyone in the accelerated class was, by definition, going to college. We had books of lists of colleges organized by areas of the country. Now, it's an app, but then it was a book! I, for some reason, decided that I specifically wanted a BS in chemistry, not a BA. MIT gave a BS in chemistry.

SOLOMON: Bachelor of Science instead of Bachelors of Arts?

HOOKER: Yes, that's right. And I wanted it to be far enough away that it wasn't too close to home, but not too far away – New England. So I must have applied early to MIT. I honestly don't remember that. But the minute I got my acceptance, I did not finish any other application. I was elated.

SOLOMON: Were your childhood or high school goals any different from what you actually ended up doing?

HOOKER: Absolutely different. It wasn't until graduate school that I “discovered” computers. Number one, I met my husband over the lab bench at MIT. But we both were accepted at Purdue. And Bob [Robert Hooker, SB Chemistry 1967] is from Indiana – from Columbus, Indiana. It was so very comfortable for him to go back to his home state, and I figured we would be in Indiana for whatever it takes to get your Ph.D. Well, that was 50 years ago in September. We're still in Indiana!

It is his home, so I guess I shouldn't be too surprised that we're still there. But when I got to Purdue, I thought that, as a graduate student in chemistry, you can take any class you might like, in addition to the core classes for chemistry. And I thought, "I never took any computer classes [at MIT]." I always thought that I wouldn't be able to do them.

And they weren't as readily available in 1963 through 1967. So I took introductory FORTRAN, BASIC – you probably don't even know what those are! They don't program in FORTRAN and BASIC very much anymore at all – punch cards and things like that. Well, I took my first classes and absolutely loved it. I just thought, "What do you do now that you think you might prefer a different major when you're in grad school in chemistry?"

So I continued in chemistry, but tried to take more computer-related classes. And it was probably three or four years into our research that my husband decided he didn't like chemistry as a profession, either, but he would like to go to medical school. And I said, "Fine, I'm really not crazy about my research. So I will get a job, and you can go to medical school." And every job that I've had, I've attempted to bring computers into it. So I didn't have much formal training in them, but I love computers.

SOLOMON: I see. You mentioned how you first thought about MIT, and how you applied to MIT. Was it unusual for young women to apply [to college] at your high school, or [your community]?

HOOKER: Yes, absolutely. The guidance counselor had this book that I was using to look things up [about colleges]. I said, "This is a list of colleges that I'd like to apply to." The counselor said, "Oh, I don't think MIT has women." So I had to indicate that, yes, for over 100 years, MIT had had women.

SOLOMON: So, no resistance, but some questioning?

HOOKER: Some questioning – exactly.

SOLOMON: How was your freshman year at MIT? Was it very different from what you had expected walking in?

HOOKER: Yes, yes and yes. I was assigned a roommate. This was the very first year that McCormick Hall was open, and my roommate was from Connecticut as well. I didn't know her, but the two of us were assigned a double. There are a lot of singles, but the doubles were on the end on the seventh floor – the top floor, in the middle, overlooking the Charles!

SOLOMON: That is gorgeous!

HOOKER: My goodness! My family was not one to vacation, other than in the car and staying with relatives. We didn't stay in hotels, and this was [like a] hotel! We had linen service. It was definitely exciting. And then, the first week in the dorm, it was meeting the other freshmen co-eds. By the way, I understand 'coeds' isn't a term that's used anymore--

SOLOMON: --It isn't.

HOOKER: It may not be a positive term, which is very strange. Anyway, I am going to continue to say "coeds," because it wasn't negative then. It never had a negative connotation, at least that we knew of.

So the other coeds all had such varied interests. It must have been a few months into it – it was winter. It was snowflakes. And one of them was going out. Her father was visiting. They were going out to take pictures of snowflakes. And they had a panel of velvet that the snowflake could land on in order to photograph it. Everybody had different interests – very diverse in many positive ways.

I had one other freshman story that I've relayed in other reminiscences. It involves Scotty MacVicar, the mother of the UROP program [Undergraduate Research Opportunities Program], Margaret MacVicar. [This oral history project was created in honor of MacVicar, SB Physics '64 and ScD Metallurgy and Materials Science '65; Dean of Undergraduate Education 1985-1990. She died at age 47 in 1991.] Scotty would take the freshman women under her wing, and she had a car. And she rounded up several of us – Edie Goldenberg and myself, and I don't know who else – and drove to downtown Boston to show us around. And we ended up being near policemen who had a paddy wagon. We had never had experience with a paddy wagon, so we said, "Well, can we see it? No one was in it!" So they showed us the paddy wagon inside, and we loved being able to tell our parents that we were in a paddy wagon in Boston – but not because of anything bad.

SOLOMON: So you lived in McCormick, which, as you said, was the first year it was open. And in order to fill it up, they had allowed, or rather, required the older women to move in?

HOOKER: Yes. Apparently, there were some women living independently. And when the dorm opened, they brought them into the dorm. And then the dorm became too full. And I happened to be an officer – a vice president or something – associated with the dorm. We were asked if we would mind living in Westgate. But they had undergraduate apartments, and so I spent-- I guess it must have been junior and senior year at Westgate.

SOLOMON: Did you like it better at McCormick or Westgate?

HOOKER: I loved the camaraderie of McCormick. Westgate was a little more remote, and therefore you had to come back to the dining hall and things like that. It was a little more distant. Probably the closest friends I made were in McCormick; we still keep in touch.

SOLOMON: It is my understanding that there were about 35 women in the class of '67, in a student body of 900 students.

HOOKER: Yes. I never felt that that was so dramatic at the time. Maybe it's because I was comfortable in mostly science classes, like I was in high school, when, mostly, there were other guys. And so it seemed fairly natural to me just to have a lot of guys around. But they were always very helpful. I never really felt as though I wasn't welcome or that I was nothing more than another student.

SOLOMON: Just another student at MIT.

HOOKER: Just another student. Exactly.

SOLOMON: How did your experience of MIT change after freshman year, and as you developed a major?

HOOKER: Well, I had already decided that chemistry was going to be it, and basically stuck with it and did not change. But I took several humanities classes. Conversational French, and I think I took conversational Russian. I enjoyed those. Most of my classmates seemed to prefer not to take humanities classes, and enjoyed the science classes more. But I enjoyed the other classes and decided to apply to Purdue in biochemistry, although I had not taken any college level biology prior to going into biochemistry.

SOLOMON: Oh, that's interesting. At this point now, we are required to take one semester of biology now.

HOOKER: And is it less chemistry then?

SOLOMON: I understand that in '67, you had your freshman year basically planned for you, except for maybe one or two electives. Currently, it is not so. You are allowed to pick whatever classes you want. But before you graduate, you have to fulfill the requirements, which include two semesters of physics, two semesters of calculus, one semester of chemistry and one semester of biology – as well as some humanities requirements. And, of course, a lot of these classes end up being requisites to whatever you're taking. I'm sorry. A lot of the time, freshmen *do* end up taking them in the freshmen year. But it has changed. I understand two semesters of chemistry were required?

HOOKER: Yes, two chemistry, two math, two physics. It seemed like there were more, but those were definitely required--

SOLOMON: It might have been two years of physics instead of two semesters.

HOOKER: --as well as math.

SOLOMON: Yes, it might have been four semesters of each.

HOOKER: One, two, three, four – yes.

SOLOMON: We have also touched on this – the gender ratio at MIT during your time here. As compared to the rest of MIT, did your major have more women in it than other majors?

HOOKER: I certainly don't remember that being the case. But again, I didn't pay attention to the discrepancy of male to female, or feel the need to have more females.

SOLOMON: Did you ever feel like your gender ever impacted your experience at MIT? Or did you face any challenges here because of it?

HOOKER: Not in a negative way. I know others didn't have the same feelings. But I felt, if anything, people wanted to help, as opposed to "What are you doing here?"

SOLOMON: Were there any classes, or professors or experiences that are memorable, for better or worse?

HOOKER: Oh, my goodness. Well, yes. Chemistry 5.428 was required for organic chemistry majors. I was an organic chemistry major; therefore, I had to take it. You had unknowns that you had to determine what they were – typically esters that had to be hydrolyzed. And you had to determine what the acid and what the ester was. So this is where I met my husband. He was also taking 5.428. He was a chemistry major, but not organic chemistry, so he did not have to take it. He was taking it for fun, which says a little something.

SOLOMON: I understand you do not consider it fun!

HOOKER: No. It involved very, very long hours. It was very difficult. My husband remembers more than I do, but my unknown was an ester, which, before you hydrolyzed it, was typically sweet smelling and not unpleasant. I believe it was butyl isobutyrate. And when you hydrolyzed it, you get butanol and isobutyric acid which smells somewhat like vomit. So yes, he thought that was pretty memorable, and he still asked me out!

Now, he had shown up in the lab one time with his girlfriend at the time, who was from Simmons. And I thought she was very attractive. And it wasn't until later in the semester that I had broken up – well, I was dumped by a different boyfriend. And so when Bob asked me out, I thought my best friend had put him up to it and said, "Take her out. She's really feeling bad." He denies that. And as we say, he's "my first husband." But it's been almost 50 years. So that was a very positive experience.

SOLOMON: Going back a little bit to the gender ratio question, I understand at MIT that you didn't feel the women and the men were treated differently.

HOOKER: Right.

SOLOMON: But did you ever feel different about being a woman in science once you left MIT?

HOOKER: I think in applying for jobs, of course, you mentioned that you graduated from MIT, and that seemed to change what people thought of you. They thought of me in a positive manner. It was like, "Oh, you went to MIT! You must be able to do anything." I think the fact that I had gone to MIT was more important than what gender I was.

I can honestly say that in my work life, I did not see – well, there may have been one individual once-- I was being asked to interview for a different job, and the director of the department said, "Are you interested in this other job? Because I don't quite understand why you're not at home, anyway." Now, that was the only instance of something like that. And today, you would probably not be permitted to say things like that. But I have not seen much of it, thankfully.

SOLOMON: You said you went to Purdue for grad school for biochemistry.

HOOKER: Yes.

SOLOMON: And you said that experience was also positive?

HOOKER: Yes. I joke about the fact that I graduated from MIT on partial credit. You know, when you take a quiz and you don't get the right answer, but you show your work? So they would give me some credit for having shown my work even though I didn't get the correct answer. I got lots of points for effort.

And so in going to grad school, taking the grad courses, I found them not only totally enjoyable, even in chemistry, totally enjoyable, but I aced them. I don't know how I became brilliant from MIT to Purdue. But that summer, I must have grown more brain cells...

SOLOMON: I recently did an interview with another alum, a mathematician. She mentioned that when she went to grad school for her master's, she felt a lot of it was repetitive, because she had taken so many of those topics already at MIT. And so it probably had to do with the pace of MIT.

HOOKER: The 'fire hose'?

SOLOMON: The fire hose, yes. It probably had to do more with that. I've been feeling the fire hose quite recently!

So you felt MIT prepared you quite adequately for grad school?

HOOKER: Quite, yes. Yes.

SOLOMON: What did you do after grad school? Did you go to work?

HOOKER: When Bob decided to go to medical school, he ended up having to take freshman biology, because he had not had biology as an undergrad. So as a graduate student, he took freshman biology, which he said was very eye opening. It was quite easy. He found most things quite easy academically. I did not.

So we then went to Indianapolis, where he started medical school. I worked in a research lab on the medical school campus at Riley Hospital studying inborn errors of metabolism. I had applied to Eli Lilly, the pharmaceutical manufacturer and probably the best place for a person with a science degree to work, as far as I'm concerned – in Indianapolis. They had a hiring freeze on at the time, and they could not hire anyone, so I took a job at the med center. And it must have been, oh, a year and a half, two years later that I got a call from Eli Lilly saying, "Are you still interested? Our hiring freeze is off." And so I interviewed. A new scientist was being hired by Lilly.

At the time, Bob was close to finishing medical school, so that we would potentially be leaving for his residency. I told the interviewer that I wasn't sure how long I would be staying in Indianapolis. I thought I'd just lost the job at that point. But the scientist that I was interviewing with said *he* wasn't sure he would stay at Lilly for more than a year, so he hired me! I was at Lilly for 30 years.

I was hired into a pharmacology lab and performed lab experiments measuring the effects of various drugs on smooth muscle tissue from a variety of animal species. I worked there for about five years and was then asked to supervise a lab running insulin and growth hormone receptor assays. I worked there for

another five years and was then asked to oversee a toxicology and testing lab for Elizabeth Arden research. Lilly had purchased Elizabeth Arden. When they sold the company after about two years, I moved to managing a tech service department in glandular insulin production for four years. I was then asked to coordinate the consolidation of the research library services across several areas of Lilly and oversee the automation of the library. From there I worked in the corporate scientific team supporting the information needs of the department. I retired from the research acquisition area, which oversaw the analysis and acquisition of external opportunities. Definitely an exciting 30 years for me!

SOLOMON: How did your undergrad years at MIT prepare you for your career?

HOOKER: I felt if I didn't know how to do something, I could figure out how to. One of the interviewers was asking me a series of questions of a biochemical nature. Had I done work in this area or that area? I had not done work in any of them. And I thought, "Well, I just lost this job offer." And I said, "However, I see no reason why I can't learn them, and I feel as though I could learn quickly." The fact that I was hired-- I suspect he was comfortable with that.

SOLOMON: Did you have any work/life issues as a woman in the workplace – not so much in terms of the prejudices around you, but managing your responsibilities at home versus at work?

HOOKER: Fortunately, Bob is one who shares responsibilities at home. He probably enjoyed being the helper at their school situation more than I did. He always looked for ways to be with the kids when they were growing up.

I think the worst part was the guilt – especially at that time, and in a rather conventional state [Indiana]. You know, "The woman should be at home taking care of her children." So it was probably more of that than--

SOLOMON: Personal guilt?

HOOKER: Yes, self-generated.

SOLOMON: And so you said you worked for 30 years with Lilly.

HOOKER: Yes, and retired from there.

SOLOMON: What did you do after you retired?

HOOKER: Well, we live near a city park, and I went over and said to them, "I should probably be outdoors and doing something active. What do you have in the way of volunteering?" And they said, "Well, we have a gardening group, and we have Rubbish Busters, where they pick up rubbish along the trails. And I said, "OK, I don't know anything about gardening. But that sounds like more fun."

And so I basically ended up with the group, which was so much fun to be with. They kept badgering me to take the master gardener class, and I ended up becoming a master gardener and sending the communications around for the volunteers.

I brought computers in to be able to satisfy my need to play with computers, and ended up basically volunteering and being on the board of the master gardeners' group. I'm also involved with helping NAMI, the National Alliance on Mental Illness. I have helped to maintain their website.

Let's see. I'm also on the board of AMITA [the Association of MIT Alumnae, which sponsors this oral history project], and I help with their website. So I am filling my life with computer things, which is wonderful, because you can do it at any time and any place.

SOLOMON: Can you tell me more about your involvement with AMITA?

HOOKER: It started before iModules. I joined AMITA as a member, and a newsletter mentioned that they needed some help with their website. This was the system, the platform that the website for [MIT] clubs were on at that time. And so that's how I started helping with computer things. One thing leads to another, and you end up on the board. I have been involved with the board for about 10 years, either as a member of the Web committee, or as archivist and now vice president. I love working with people who are part of the group. And that's why I continue to be involved. I have also been a member of the MIT Educational Council for over 20 years, and I am now the Vice Chair of the Central Indiana Region.

SOLOMON: Do you have any advice for any women who are thinking of going to MIT or are in the middle of the MIT experience?

HOOKER: This is a hard one to think about, because for the 50th reunion, we were asked to do some remembrances, and that was one of the questions they asked. My thoughts along those lines were to be more confident at trying things that you may not think you can do. Do as I say, not as I did: Try those computer courses before you've spent your whole time majoring in chemistry, when you might have preferred to do something else. Take a few more risks in the way of experiences. I wish I had.

SOLOMON: Well, it was fantastic meeting you. Thank you so much!

HOOKER: Thank you!