

**Interviews of the Margaret MacVicar Memorial AMITA Oral History Project, MC 356**  
Massachusetts Institute of Technology, Institute Archives and Special Collections

**Margolia Cohen Gilson** – class of 1956

Interviewed by Madeleine Kline, class of 2020

August 15, 2019

## **Margaret MacVicar Memorial AMITA Oral History Project**

Margolia Cohen Gilson (SB Biology 1956) was interviewed on August 15th, 2019 by Madeleine Kline (SB Biology and Chemistry 2020) in the Lincoln, Massachusetts Public Library.

Gilson grew up in Keene, New Hampshire, and excelled in science. In high school, she was selected to attend The Jackson Laboratory's Summer Student Program in Bar Harbor, Maine. She also participated in the Westinghouse Science Talent Search and was awarded a citation as one of the top 300 science students in the country.

Gilson studied biology at MIT in a class where there were 50 men for each woman. After college and while her two children were young, Gilson did analytical chemistry work, was a substitute teacher and taught at nursing schools. She also taught general chemistry at American International College, where she later earned a master's degree in education. Gilson worked as a technician at Lincoln Lab in Lexington, Massachusetts from 1980-1990, where she operated an electron beam instrument that scanned semiconductors to determine their chemical composition from their spectrums.

Later in life, Gilson, who has a passion for art, studied and then taught jewelry making. At the time of this interview, she was wearing jewelry that she made from the gold dust residue from the vacuum coating machine she operated at Lincoln Lab.

**KLINE:** I'm glad to have a chance to talk with you today. Could we start by talking a bit about your childhood, your family and your early interests?

**GILSON:** My name is Margolia Cohen Gilson. I graduated from Keene, New Hampshire High School in 1952, but since I was in seventh grade, I always wanted to study the upper atmosphere. I was inspired by an article in the New York Times Sunday Magazine.

A science teacher in junior high school, the only man that I ever had in grammar school [as a teacher], encouraged me in science. He went off to fight in World War II and came back and became principal of the school. A lovely man.

As for the science part, I know my mother was totally bewildered, because her field was music. She played the violin, and I was a total failure [at that]. After six years of piano lessons, my teacher finally said, "When you decide to practice, why don't you have your mother call me." [LAUGHS] I never did, but I did a lot of extra stuff all through school that were science projects of different types.

One of the really nice experiences I had still in high school, where I was very good student, began when a biology teacher called me to her room when I was a junior. She said, "I'd like you to meet this lady." Her name was Mrs. Rigby, and she was a representative of the Jackson Memorial Laboratory in Bar Harbor, Maine. She apparently was looking for a student that the state of New Hampshire could sponsor for a summer science program at the lab. This was with a teacher and a small group of students. I was selected, and the state of New Hampshire sent me with a scholarship. My parents were very thrilled.

I was working with inbred mice. These were new experiences. I had never heard a scientist in a seminar before, or, especially, arguing with each other over the theories. Howard Temin, one of my classmates, later turned out to win a Nobel Prize, which he shared with David Baltimore from MIT.

[David Baltimore and Howard Temin shared the 1975 Nobel Prize in Physiology or Medicine with Renato Dulbecco; Temin and Baltimore discovered reverse transcriptase simultaneously and independently. Professor Temin, a virologist and geneticist, taught at the University of Wisconsin, Madison, and had been a student of Professor Dulbecco's at Caltech. Dr. Baltimore reorganized MIT's Cancer Center before his prominent role in founding the Whitehead Institute of Biomedical Research, among numerous other distinctions. Like Margolia Gilson and Howard Temin, Dr. Baltimore spent a summer during high school at the Jackson Laboratory's Summer Student Program in Maine.]

KLINER: So they did a good job identifying bright students then.

GILSON: Well, the science teacher that dealt with our group was from Thayer Academy [a private prep school in Braintree, Massachusetts]. He started the laboratory program a few years earlier, with some of his students, and it expanded. Now, I believe, the whole thing is taken over by the National Science Foundation as part of Zero Student Program.

KLINER: But at the time they had teachers from high schools coming in?

GILSON: At the time, they didn't have anything like this for high school students, only college sophomores and older, and so there were probably about 12 to 15 of us in the first group. The second year I went, I was asked back, so I was thrilled to go. That second year we worked directly with one of the researchers and in their lab and did a project. And the second year I also went on scholarship. At that point, I had already been accepted to MIT.

KLINER: So in between the two summers that you went, you decided you wanted to study science?

GILSON: No, I knew I was going study science. I was interested in the upper air, and I was interested in two schools when I was a senior before MIT made the offer. The two schools I was interested in offered a course in meteorology. The only two schools that were within some reasonable distance of me were MIT and Cornell. I got into both, and I picked MIT, which I could reach by train from Keene, New Hampshire right down into Boston.

KLINE: The Jackson Lab focused on genetics, right?

GILSON: Genetics.

KLINE: And biology.

GILSON: And they inbred mice. Believe me, when someone sticks a mouse tail in your hand, you don't drop it. You hold it by the tail, and you learn how to deal with these things. We had very nice experiences, because we were a small group. We saw animal surgery. They did actually some of the original early research in transplanting embryos, and were using rabbits. But this was the later type of thing that became transposing embryos in humans for in vitro fertilization.

KLINE: In vitro fertilization.

GILSON: We lived in a new estate that had been donated to the laboratory. It survived the very big fire in Bar Harbor of 1928 or 1929, and the heirs were tired of supporting it. It was something like a 50-room estate overlooking the ocean from a cliff. It was a real dream.

KLINE: I think I've heard about this.

GILSON: It was called High Seas. That was the name of the estate. The lab still owns it. The laboratory, by the way, has expanded greatly and has other places now where they also do the work. I think Farmington, Connecticut is one of them.

KLINE: JAX mice every lab.

GILSON: I think they may have one on the west coast of Florida, and they may have one in California--

KLINE: But even though it wasn't meteorology or environmental science, you still--

GILSON: It was still science.

KLINE: It was still science.

GILSON: So when I got to MIT, I majored in Course 7, which was biology.

KLINE: Did your interests shift, or was that the best way to study environmental science?

GILSON: Well, it wasn't environmental at the time. It was a different generation.

These are the people in my class [shows the picture of the class of '56], at the entrance off Mass. Ave. It was put into the New York Times Magazine titled, "The Most Wanted Class." This was the beginning of the internet age. Some of these classmates became very wealthy and quite famous, and were my friends.

When I was a student at MIT, I met so many young men, so many boys, that they all started to look alike. I decided that when I went through the hallways if I had met someone and they had met me and I didn't know them, look at them, at least smile, they would be hurt. I decided to smile at them all, and I made lots of friends. I do remember certain ones much better than others, of course, but we're here talking more about the women students.

KLINE: So again, to get to MIT you took the train from Keene, New Hampshire?

GILSON: And Keene, New Hampshire did not have the kind of high school preparation that a lot of the people at MIT had. When I was a junior in high school, I took physics. Well, that teacher didn't think that girls were for science--

KLINE: In high school?

GILSON: Yes, and he kind of ignored me. Now, he had a couple of people in previous years, win one of the 300 awards. They were called the Westinghouse Science Talent Search in those days. You did a project, and you took a test, and then they picked out the top 300. I think the top 10 were sent to Washington for a week or something. I was not part of that, but I was part of the top 300. And we had a couple of others [from my school] in the past that were up there. But when I won, the teacher was floored, and he had whole different attitude about women after that.

One of the things that happened is a science society in Boston that meets, they brought all the students that were within a reasonable distance to come and talk to them about the projects that they did. My project involved the mice, because I had been up to the [Jackson] laboratory.

There's another MIT classmate of mine who was there, George [last name uncertain]. I believe he ground a telescope lens, something like that. I just knew him slightly.

I want to go back to the Jackson Lab for a minute. There was a farm that had been donated to the laboratory, and that's where they were raising the rabbits,

but they also had other animals there. There was a man who was in charge of it. His name was Dr. Sawin, I believe. He later got a Nobel Prize also for his work. I don't know the details. In any case, it was a dream to have had the experience of going and to live in an estate overlooking the ocean on the cliffs of Bar Harbor. We all had to take turns keeping it clean, but that's OK. [LAUGHS]

I just wanted to talk about some of my classmates; that some of them were really special. I was just very ordinary at MIT. Part of it had to do with the fact that I had come from a different kind of background than most people who prepare for MIT. Keene, New Hampshire had about maybe 150 students in the high school graduating with me, and about 20% went to college. Some went later: there was a state teacher's college in Keene, and so some went later or they took a course at a time. But I was one of the few – although there were others who went to Ivy League schools, they were all mostly boys, or the girls went to Smith or schools like that. They didn't go to [a] technical school [like MIT].

I didn't have calculus, and I didn't have a lot of other things. The physics was not done the way MIT does it, and it was really pretty lacking for preparation, so I had a very tough first year at MIT. But I wanted to finish, and I wanted to be there, so I kept working, and I did work hard. Finally, my last semester senior year, I finally made the dean's list, and I graduated with about a 3.5 cum.

KLINE: Not bad! Did you live on campus?

GILSON: That was [3.5] out of five points, not out of 4. Did they change the system?

KLINE: No, it's still out five.

GILSON: [LAUGHS] So 3.5 out of five is average.

KLINE: [LAUGHS] Yes – but you did it.

GILSON: But I mean it, I did it. And I also did one other thing which my parents were thrilled about: I got married. [LAUGHS] I graduated in June and married in September. He was also from MIT, of course a year ahead. An older man by six months. [LAUGHS]

KLINE: You say your parents were thrilled. Was that the expectation, that you would go to college and get married?

GILSON: Well, the expectation was that I would meet somebody nice at college and get married, but not that I would work. But that was the times.

I want to talk more about the women that I knew.

KLINE: Yes – and how did you meet other women?

GILSON: Well, my first year, my mother said to me about two or three weeks before school started, “Let's drive down to Boston,” because I was a driver, she never drove, “and see if you need anything for your room.” We get down to the admissions office, and they say “Well, we don't have a room for you.” And I said, “Why?” And they said, “Well, we had a summer student who was 16 and she's from Chicago. You're from New Hampshire, and you can take the train down.” My mother said, “Well, we better find a place for you to live.” We looked around, and several of the girls lived in Cambridge in apartments or rooms that they rented. My mother said, “You know, you've never had to cook for yourself. I think the best thing would be for you to be—” and we ended up at the Cambridge YWCA. I went there for my meals, but it was not for students.

There were a lot of women there that were part of the U.S. Air Force. There were women there that were just working women. I had a private bedroom, but there was like a transom that was opened, and I was down the hall from the smoking room. It was very noisy, so I would study in the evening at MIT in the Margaret Cheney Room, where they had a very different setup than they currently do. And they had a study room.

They had a couple of cots, because the architecture students used to have to stay overnight sometimes. I'm sure they still do.

KLINE: I'm sure, in the studio.

GILSON: Then there was a large kitchen area and a big living room area with a lovely grand piano. Some of the girls were very talented. Not me. And we had a place for our lockers and for our books in the lockers. We had a very nice suite of rooms there, and the study room had a collection of what they called bibles. They were the old notes from previous people who would have taken the basic courses. We used those as a guide for our studying.

There were about three or four desks in there [the Cheney Room], and the girls helped each other. That's why I did my studying, and my first semester was quite disastrous. I had to repeat 801 my second semester.

Then, my teacher, Professor Sears – the guy wrote the textbook [Francis Sears, MIT physics professor for 35 years; co-author of *University Physics*] – you don't have the same textbook anymore. But Sears wrote the textbook for MIT physics for years, the basic book. He always was very well dressed in a suit. He finally moved on to Dartmouth College, and the system changed. He was an excellent teacher. He would start with something that was very simple and build on it

until you finally got a complex problem. I did go to summer school and take 802. You know these numbers, right?

KLINE: Yup. Still the same.

GILSON: [LAUGHS] Eventually I was better, much better, and I had better preparation in chemistry [than in physics] in high school. When you're picking a major, you want to pick something that comes easy to you. And I was interested in biology, and so I picked course 7.

KLINE: You were interested in the biology because of--

GILSON: In general, I was interested in biology. Biology in my day was looked down on, because it was less quantitative than some of the other sciences, but it turned out in the future to become the most interesting of all. The other one that was interesting was Electrical Engineering, course 6. But I wasn't into that field. As a matter of fact, I think the hardest part of my physics was the electrical portion. I could never keep my fingers straight. You know the--

KLINE: The right-hand rule?

GILSON: The right-hand rule. [LAUGHS] Anyhow, I did enjoy what I did, and after I graduated, I got married.

I didn't really work well in my field, but it did open up opportunities, and I did work. When I was first married, I worked at a company that was part of Johnson & Johnson. It was called Chicopee Mills. They manufactured baby blankets and diapers and things of that sort. And I was actually doing analytical chemistry. I had all the basic chemistry stuff.

I knew how to do gravimetric analysis and all these things, so they needed to have things like the cotton fibers checked, and there were various things of that sort. Then later after we moved to Lexington [Massachusetts] area, my husband had done a thesis under a professor in course 10, who started a company called Amicon.

KLINE: Your husband or the professor?

GILSON: Not my husband; the professor opened it. My husband stayed in touch with a friend of his, a fraternity brother, who said to him, "Why don't you apply? We're really growing." So he did apply. He had been with Monsanto 10 years, and we made the switch to the Boston area. At this point we had two children, and the company that he applied to was growing, and it did well.



Amicon eventually was sold and the professor went out to California. He had a patent on a semi-permeable membrane. My husband was interested in plastics, and he had worked in something like that in college, and he continued working on that. Monsanto was his first job in Springfield.

KLINE: You lived in Springfield for 10 years?

GILSON: Yes, we lived in Springfield, Mass. for the first 10 years, and then we moved to Lexington, which I liked much better.

KLINE: You said your husband was in a fraternity?

GILSON: Yes, he was in Alpha Epsilon Pi.

KLINE: Were there sororities at that time?

GILSON: Oh, no. No sororities. When you have, I'm not sure exactly how many but probably 60 women, period, and there were a lot of people who commuted-- The dorm held 17. After the first year, I did manage to get into the dorms on Bay State Road [in Boston].

KLINE: So you lived there your second year?

GILSON: Mrs. Alvord was our house mother. She was a lovely woman. I remember some funny things, and they weren't so funny at the time. I had a roommate. I think she was from California. She had a boyfriend who was at Northeastern, and he was also from her hometown. They were going to elope, and Mrs. Alvord got wind of it and went down to South Station and grabbed the two of them. They were going to go to, I think it was either North Carolina or South Carolina, where you have a 24-hour residency requirement [for a marriage license], at least at that time, so people would go there and elope.

She was such a lovely woman. One of the girls who was from the Midwest, Cora, she had a boyfriend, Olaf, who was also an MIT student. They had gone together for years, and they wanted to get married. She offered them her house near the coast of Maine for their honeymoon. And they were both students, and they were very nice people, the two of them. Not so long ago I read something in *Technology Review* about their career that they had written.

KLINE: This is Olaf and Cora?

GILSON: Yes.

KLINE: The house mother, what was her name?

GILSON: The house mother was Mrs. Alvord. Her husband had been a professor, I believe, at Northeastern. He died young, and the women who were – I don't know what you would call it, but their husbands were department heads or people that were important to MIT. They knew of her through the fact that her husband was also a college professor, and they recommended her as the house mother. She was a charming woman. Very nice. I got along very well with her. Some of the kids didn't like her as well. [LAUGHS] There were a lot of independent minded people at MIT.

KLINE: You lived in the house on Bay State--

GILSON: For three years, I was on Bay State Road.

KLINE: Did you make friends there? Did you have a community?

GILSON: We all headed across the bridge [between Boston and Cambridge]. One of the things about that house was that Mrs. McCormick set up a fund, a taxi fund. I don't know if anyone has ever talked about it much. 120 Bay State Road to MIT is a good hike, especially if you have to cross the bridge and it's windy and cold and--

KLINE: Snowing.

GILSON: If it was below 20 degrees or if it was raining, three of us could get together and take a cab in either direction, and it would be paid for by this fund that the house mother controlled.

KLINE: I didn't know that.

GILSON: Yes. I think that was so thoughtful. It was a wonderful idea. We were actually living next door to Mrs. Lahey of the Lahey Clinic, and her husband, who passed away during the summer before I was there. It was after my sophomore year. But the clinic was on that side street that is off Bay State Road, and then it moved out to Burlington eventually.

She had a dedicated parking space, because her husband was a doctor and the head of a clinic and he had to be available. Our boyfriends used to park there and get towed frequently. [LAUGHS] I mean, it was a private parking space for her. And even her car-- Mrs. McCormick had the same sort of car as she did. It was like an English high car, and you would step in and sit down and be chauffeured. It was a whole different world.

KLINE: Did you know Mrs. Lahey?

GILSON: No, we didn't know her well. She was not thrilled living next to college girls. But I knew Mrs. McCormick to the extent that whenever something special came to Boston, like a special symphony or some ballet, or something that was very interesting, she would take a box for the week and invite her friends, and this is how she entertained. She was already something like 92 at the time.

One time, she had 10 seats available for Sadler's Wells [dance company]. I loved ballet. I was a klutz as a dancer, but I loved watching it, and I was one of the lucky people who was able to go, and it was a wonderful ballet. She started to talk to me – when she discovered I was the only biology student there – about her work supporting the Worcester Foundation, with birth control. I was so embarrassed because I was very sheltered. Actually, most of the girls were. It was a lot different than today's generation.

Another thing about Mrs. McCormick is that one day she invited all of us to her apartment on Commonwealth Avenue.

She had this beautiful home. We walk in and there's this thick, deep, maroon carpeting. It was like walking into a different world. She had these long windows with these massive drapes and a library like in a movie where they show a library with a whole room and the ladder that goes around. That kind of thing. And, you know, a table in the middle with a huge atlas. It was just a whole different experience. It was very interesting, and it was in some ways exciting. It was how the extremely rich lived in that era.

Mrs. McCormick had her staff wait on us. She obviously had a prepared catered meal. We all went, the girls. There were only 17 of us and the house mother, so it wasn't that many people, but we were all over her living room and dining room. It was really quite nice.

She was very thoughtful in many ways. She was an interesting woman. I didn't know her personally; I don't think any of us did. But she was very fond of our house mother, and she would come and visit. So that's about all I know and that.

Anyway, I made a lot of friends.

Here's a picture of me when I graduated [POINTS TO HER 40<sup>TH</sup> REUNION BOOK]. Here's a picture of me at the 40th reunion.

KLINE: Oh, wow.

KLINE: Were you a member of any clubs?

GILSON: I was in the biology club, and I was in something to do with women. I can't remember, but there were different things that I liked to do.

KLINE: Were any of your extracurriculars artistic?

GILSON: I didn't do artistic things then, but I had begged my mother when I was 10. I wanted to take drawing lessons, so she finally signed me up with a teacher who had graduated from Pratt [the Pratt Institute in New York], and I enjoyed it very much.

One of the things I wanted to point out is when I went to my senior year of MIT, we had room for electives in the department, so I took an elective that had something to do with birds. The professor – whose name I forgot – was a really lovely gentleman. The project had to do with the population east of the Appalachians and west of the Appalachians of a certain type of bird. This is before the days of computer, when such a thing could be figured out. I kind of gave up on the actual figuring out, but what I did do was I made a painting, a picture on paper with the two species that had split apart and developed separately. The teacher thought that was so wonderful. I got an A on the paper. This particular teacher lived in Lincoln, and he invited us, in his biology senior class, to his home.

There weren't so many of us at this point. He took us, basically, on an environmental tour. We saw a vernal pond, and he showed us things out in Lincoln. It was really very interesting, but no other professor had ever invited us to their home. I think that was a very important thing to have done.

Have you been invited to any professor's home?

KLINE: No, I don't think so.

GILSON: I think it's important to put a little realism into the fact that you're a teacher.

KLINE: You mentioned Mrs. Compton [wife of Karl Compton, physicist and MIT's president from 1930 to 1948] to me earlier, about being invited to her apartment.

GILSON: Oh, yes. This is after her husband passed away. She came over to the woman's dorm, and she made a presentation on her trip to Israel. And being Jewish and being a member of Hillel, and [given the fact that] I had never traveled like that, I was very interested. I asked some questions, and she said "Well, if you would like to bring some friends over to my living room, I will show you more." At the time, I was dating my future husband, and I had other friends from Hillel, so there were about four or five of us that went. We had a wonderful evening. I think she may have served a light supper, but that part I don't remember as

much as the fact that she showed us all these slides and she talked about the country, and it was fascinating. And he was getting Technion started. That's why he was in Israel.

KLINE: Her husband?

GILSON: Yes.

KLINE: OK, wow.

GILSON: Dr. Compton. You know, former MIT president. So, yes. His wife was wonderful. She was living, I think, at 1000 Memorial Drive, in an apartment.

KLINE: In some of our previous conversations, you mentioned some of your colleagues from MIT, like your roommate you were talking about, Fushi.

GILSON: Oh, yes. Let me talk about some of the girls that I particularly remember. Fushi entered with us, but she was an architect, so she graduated a year later. I wanted to talk about Fushi because she was very unusual. She was Chinese. World War II she spent in China with her family, and they kept moving inland further and further.

After the war, the communists came. At that point, the whole family had to get out, and so they went to Argentina, because people went to a country where they were able to get into it. They later moved to Brazil. Fushi, who was a very pretty girl-- If you look at the yearbook from the following year you might see her picture-- She actually married somebody from MIT that was a PhD.

She attended the 60th reunion with me, and we stayed together at the Hyatt. She has since passed away. She used to travel with her father. Well, her father was a cousin of I. M. Pei, the architect that designed a building at MIT, and I think that's what inspired her to go into that field. I don't think she worked too much in it [architecture], but she did design her home. I never visited it. It was in California. She has a daughter who has a PhD in biophysics or something and who was connected with Harvard. She's in the Boston area.

Fushi was the oldest [of her siblings] and went home to Argentina on vacations. Once she went with a car.

KLINE: Really?

GILSON: The car was shipped. She bought it here. Apparently, she had some family or some connections here. Another time it was a refrigerator, and it was very expensive. It was very hard to get these things when you were in Argentina.

And as a matter of fact, my husband had occasion when he was with Monsanto to go to Argentina on a plant startup and the young engineer he worked with came to visit. We were living in our first home in Springfield, Mass. He walks in and he looks at my refrigerator and he says, "It took me a whole year of saving to buy one for my wife." I guess things were very expensive there.

KLINE: So she would buy things in Boston and ship them home?

GILSON: Fushi, yes. She would buy things in Boston. She was in my freshman section.

KLINE: Oh, nice.

GILSON: Do you still have freshmen sections where you go to all the classes together?

KLINE: No.

GILSON: Well, we did, and you meet a lot of people that way that you get to know. That was one of the advantages. Then there was another girl in the section, and she got a PhD in, I think, biophysics. She became the head of a department at a 3,000-student college in Texas. Her father had graduated MIT.

KLINE: Can you tell me more about your interest in art?

GILSON: I had always been interested in art, so once I was married and the children were in school, I decided to take some art classes locally. I went to Lincoln, to the De Cordova Museum, and took several different classes there. I tried pottery. I tried this, I tried that, just because I was interested in doing different things. I finally ended up at Lexington Arts and Crafts making jewelry.

KLINE: What about your time working at Lincoln Lab?

GILSON: I worked for Lincoln Lab for 10 years. One of the things I was doing was testing their semiconductors in the Auger and the microprobe, which are both electron beam instruments. The Auger has the ability, using an inert gas and an electron beam to cut through the sample. We studied the layers of the semiconductors, the chemistry, and got scans. I can read the scans I was doing that kind of thing.

KLINE: To study their structure or composition?

GILSON: Well, the composition, because they were making semiconductors. John Fan [serial inventor who founded the Kopin Corporation; worked with vanadium oxide at Lincoln Lab, and pioneered optical coatings to insulate windows] was the head of the group. It was #83 in Lincoln Lab.

KLINE: Who was John Fan?

GILSON: He later started his own company. He was working with solar cells. I worked at Lincoln Lab while my kids were in college.

KLINE: I wanted to talk a little bit about your career and the time--

GILSON: In between.

KLINE: Yes; there was a lot of time in between, right?

GILSON: Yes. The first 10 years in Springfield I couldn't get any work, because Monsanto, where my husband worked, would not hire people who were related to other people there. When we moved to Springfield, I was hoping to work in research. I went to American International Colleges, spoke to the Biology Department head, and described my background. But the only thing I was able to do was some other part-time projects. I did some gravimetric analysis for Baker Extracts. For example, they do other flavorings, too, but they have to test the quality and the different things about the extracts. I had a full load of colors and samples that I took home for my kitchen that were OK. They'd never been used.

I also worked for part of Johnson & Johnson. And at the time I worked for them, I was a newlywed and didn't have any children. One day, the head in the research area called me in and he said, "I'm moving to another company. I'd like you to have my samples." These were things like crib sheets, diapers, et cetera, I hadn't had children yet, so he said, "Don't wait too long." He said, "We did, and we didn't have any [children]." It's too bad. He was a very nice man.

So I had this pre-baby layette, and eventually it did get used. First was my son, and the second child was a daughter. Those are my children. My son is a dentist in Plantation, Florida, and my daughter got a dual degree from Simmons in Chemistry and the Mass College of Pharmacy. She worked as a pharmacist for a number of years, and then she decided a few years ago to give it all up. She makes pottery, and she has a studio in the mills in Lowell.

KLINE: So she has a similar interest to yours.

GILSON: Yes, she does.

KLINE: So, while your children were young, you weren't working?

GILSON: I was working on and off. I did some substitute teaching. I found substitute teaching was really the pits. If you had kids whose families you knew, and you told their families how they acted up in class with the substitute, their families got annoyed with you.

Then I taught student nurses biology and chemistry, in Springfield. I got the job by looking in the newspaper and seeing they were advertising for nurses. And on a whim I called, and they said, "Yes, we could use a science teacher." Then, when I moved to the Boston area, I taught the same sort of thing at Melrose Hospital School of Nursing. These were part-time jobs. I was able to take a baby sitter for my children when they were young, or they'd be in school I'd set up my hours.

About four years after we were in Springfield, I suddenly got a call from American International College, from the biology department head. He said, "I'm interested in doing research." He thought I was very cute and charming, but he wasn't interested at that time. A few years go by and he calls and he said, "Would you be interested in filling in as a teacher in general chemistry? We have a sabbatical situation where the person won't be there for a year." I said yes, and I wondered what to do with my year-and-a-half-old baby. So I got a baby sitter. This was for my son. At AIC, they set up a schedule Monday, Wednesday and Friday: lecture 10:00 to 11:00, and Monday and Wednesday lab 1:00 to 4:00. I didn't have to be there any other time.

A beautiful office. Bigger than this room we're in right now. A salary of \$1,800 for the year. And they were very nice. American International College was. After I taught I decided to go back and get a master's in education, which is what they offered. About the time I finished was when my husband got this offer to go to Amicon, in Lexington.

KLINE: Where did you get the master's?

GILSON: From American International College.

KLINE: So you knew you wanted to do more teaching?

GILSON: Yes. I decided after I taught that year that I enjoyed the teaching, and I'd stay with the teaching. At least I could get a job teaching. I had taught before I got a certification in Springfield. I already had the certification by the time I was in Melrose. And I substituted, and I eventually was teaching chemistry at Lexington High School.

KLINE: Really?

GILSON: With teaching, it turns out if you know something more about some other subject than the average person does, you can teach it if you want to teach it. As for arts and crafts, beads suddenly became very popular. Long necklaces. I learned how to do knotting and I started a bead business. My earrings--

KLINE: Oh, they're beautiful.



GILSON: These are things that I made.

KLINE: Oh, wow.

GILSON: I taught Adult Ed jewelry making, and then in Framingham, at the museum there. I taught not just in this area. I traveled all over to do this stuff.

KLINE: This was more recently?

GILSON: No. This is in the 1980s and '90s, primarily.

KLINE: Do you think that your interest in science was related to your interest in arts and crafts and jewelry?

GILSON: I probably had good finger dexterity, and good eyesight. And I was interested in looking at things and studying things and trying to figure out things. And looking at things and seeing a different use for them.

KLINE: So your work at the Lincoln Lab was after your jewelry making and teaching?

GILSON: No, I worked from 1980 to 1990 at Lincoln Lab. My husband died about six months later, unexpectedly, in an accident.

KLINE: I'm so sorry.

GILSON: At that point, I did a lot more with the teaching of the jewelry, because when you're in your 50's nobody is going to hire you for technical work.

My husband didn't leave a huge amount, because he was with a small company. He'd liked it, but they had no benefits, so even though he had worked at Monsanto, when I called them to see if he had benefits from them (he had been there 10 years), they said he has to be living to collect them. And I wasn't old enough for social security. I was 56, so I had to figure out how to pay the bills. So I did it with the teaching.

KLINE: Just going back to Lincoln Lab. What was your experience there like, and how did you get there from teaching?

GILSON: Well, at Lincoln Lab it was chemistry in the sense of scans, but it wasn't chemistry in the sense of wet chemistry.

Wet chemistry I had done for the Baker Extracts, and then I also had done a short stint for a company that I did just a research project for. It was in Springfield, but they just wanted a research paper on this stuff, which I did. It had to do with like rubs her for sore muscles. I'm trying to think of the name of the company. They're out of business now.

I also tutored. I tutored for the school department in both Springfield and Lexington, and I enjoyed the tutoring. You know, the one on one. They usually were with students who had long-term illness. My tutoring began in Springfield, Mass., when a neighbor called me. My son was about three months. She said, "You know, I have a friend who's got a son in high school. He's having trouble in biology. Do you think you might be interested in tutoring him?" And I did. Then I said to myself, "I can do this." By the time my children were ready for school, I had a tutoring business at my kitchen table every afternoon, Monday through Thursday. You know, from about 3:30 to 5:00. That was very good. I mean, it was in science. I also did this stuff for the school department during the day when they would be in school.

KLINE: Can you say more about Lincoln Lab?

GILSON: The equipment I ran was huge. It took about six months to learn how to run it. You had to have a vacuum of something like 10 to the minus 10. Very, very high vacuum in order to get this electron beam generated from an inert gas. And the electron beam would hit a sample. We used a small sample.

One of the things I think they realized when they hired me was that I knew how to polish stones because of the jewelry work I had done. They had to have a very smooth surface for this electron beam to hit in the semiconductor. And they also needed somebody with finger dexterity, and I was able to do that.

KLINE: You were in a technician role?

GILSON: It was a technician role, yes. The kids were in college and we needed the money.

KLINE: Were other women working at Lincoln Lab?

GILSON: There were other women around, but not doing what I was doing.

The equipment I worked with took up a whole room. You'd get a scan and you'd analyze it to figure out what the chemicals were and the approximate amount of them. For example, one of the ones I remember was a semiconductor of mercury and cadmium and tellurium. They were working with the rare earths, and I was a little concerned about the radiation portion, in terms of my health. It was old equipment, and my boss was very annoyed that I insisted on having it checked before I started working on it. Because it was obvious it was X-rays, and it was something about warnings and this other stuff that I was given to read. She was annoyed that I bothered, but anyway, I did.

KLINE: You have to.

GILSON: But here I am still, at 85.

KLINE: So there were other women who didn't work with such heavy machinery but who were--

GILSON: I'm talking about technical work, not secretarial. One woman was across the hall from me, and she had a PhD from MIT. I didn't really know much about what she was doing. And my supervisor, she only had a bachelor's degree from Tufts. She was one of the few people that did not have an advanced degree. Anyway, I knew after 10 years I had enough.

KLINE: Was the environment there different as a woman than it had been at MIT?

GILSON: Much different.

KLINE: Were there more women? Was it more friendly?

GILSON: Well, it's hard to say more women. There were a few women scientists, but there were women scientists at MIT, too. I don't think there was a significant difference.

But you know, sometimes you have to do what's necessary for the family, and working was [for me].

KLINE: I wanted to go back to your family growing up. Do you think there were influences that led you to becoming a student at MIT?

GILSON: Oh, there's no question. My mother was in the middle of a group of eight children. She had three younger sisters that she enjoyed teaching. And she said, "I always knew I'd be a teacher." She went to Plymouth, it was called a normal school; It's part of the state college system of New Hampshire. She was there for two years. After two years she taught elementary [school]. Three years prepared you for high school. But she liked the little ones better, so she always taught her own sisters. (The brothers were older.)

She taught me observation, which is the basic thing in science. She'd say, "Look at this bush. You see this. Now, you watch that. That's a bud, and that's going to turn into a flower."

I'd like to look down on the ground and pick up stones. I enjoyed picking up stones. As a matter of fact, I'm a member of a rock and mineral society. And I've taken some classes at Mass College of Art. One of the things I took is a couple of courses in gemology, where we cut stones.

KLINE: Did you cut the ruby on your ring?

GILSON: I bought it at a show, but I set it.

KLINE: It's beautiful.

GILSON: You see the little—[POINTS TO HER RING] That's gold. Let me tell you where that gold came from. When we did the samples at Lincoln Lab for the electron beam analysis, certain samples had to be coated with gold or [INAUDIBLE] in an air evaporator. In a domed high vacuum, an electron beam vaporized the gold, which covered the sample, the dome and everything in the dome.

That's what this is. That's from the dome. I mean, you don't get that much. It takes a while to get even this much gold, but we had to clean after each use, because we couldn't see our work otherwise.

KLINE: That's really cool.

GILSON: I was going to talk about some of the other women I knew at MIT.

KLINE: Please.

GILSON: First of all, none of them came from Keene, New Hampshire except for me. Most of them came from schools that were located in the cities where they did have a much better background.

Some of the girls really were quite brilliant. I wasn't, but I remember my freshman class there was a girl I was very friendly with. Her name was Barbara, and she had a twin brother. The two of them were students at MIT. They lived in the Boston area, and their father was a schoolteacher in one of the good high schools. And I guess a lot of the girls had come from very sheltered environments at home. This girl Barbara was absolutely brilliant and helped me with math, but she was too busy with being with the boys, and she actually skipped labs, failed and did not graduate with us. I don't believe her brother did, either. They were both too immature. I don't know whatever happened to her, but I gather she came back and eventually got her degree.

Marilyn Schranze [Marilyn Schranze Gulotta SB '56 General Course, SM '57 Mechanical Engineering] was a very smart girl. She was very good with math. Her daughter has a PhD in something like biochemistry and worked with a Nobel Prize winner.

And Caroline Disario [Caroline Disario Chihoski, SB '56 Civil and Environmental Engineering], whose father graduated MIT, set the school on its heels because she wanted to take course 2, civil engineering. One of the things they did was go to summer camp up in Maine and learned how to use the transit and all that stuff. It turned out to be a major problem to send a girl, because she would have to have not only a chaperone, a separate place to stay, a separate bathroom, et cetera. The upshot is that she took an extra course or two. She later married

when she graduated, an MIT graduate, and sent about three children to MIT, including one or two girls.

KLINE: You were going to tell me more about your father--

GILSON: My father's family was interesting. My name, Margolia, is after his mother, who was an immigrant. She had TB and was removed for him from him a week after he was born. Because his father wasn't capable of dealing with him or his older brother, the boys grew up in three different orphanages.

But it turned out that a cousin of my father's, had a daughter who at one point moved to Brooklyn. The daughter took a course at Brooklyn College called Jewish Genealogy and discovered that this woman who gave the course, this professor, had left Europe with her father's collection of negatives. He was the town photographer, from a town on the Polish border of Russia. If you go to the Holocaust Museum-- I think it's the one in Washington, although it could be the one in New York, I'm not 100% sure. I've been to both. Anyway, there is a hallway between two of the buildings. It's floor-to-ceiling photos, photos of the people of this town that was wiped out by the Nazis that the photographer had taken of them in the early '30s or whenever.

My father's cousin, the one who had taken the genealogy course, had gone with her mother in about 1932 to visit the family, because it was her family, and so she had snapshots, too. She had additional pictures that go back about four or five generations. And there's a book called "There Was a World." It was written by this particular professor, and it shows pictures of this community. And in the original edition, Margolia Cohen, which was my maiden name, appears three times.

So my father's family tree can trace itself back, which is very unusual in the Jewish community because the records were kept in the synagogues and they were burned down. My daughter, who became a pharmacist, discovered that if you go back about three or four generations, there was a pharmacist in the family in that town. [LAUGHS] It was interesting to see and to read about [the town and my family's history].

When I was in college, I was involved in Hillel to the extent that I became the treasurer at one time. That was enough to satisfy me for the rest of my life about being a class officer! [LAUGHS] I had to submit a report to the IRS and that really bugged me!

There weren't that many women, so I think that the women that were there tended to go into either chemistry, some biology. The one that was with me in

biology, I spoke about her before. Her father had graduated from MIT. She was from the Midwest.

KLINE: Is there anything else you'd want to say about your MIT experience or your career experience?

GILSON: Well, I was very happy at MIT. I did work hard, I have to say that. My first year was hard, when I had no dorm to live in. I was really quite excited later to visit the new women's dorm and see some of this stuff from Mrs. McCormick's house. It brought back the memory of the visit we had with her that one night. And for me, going to MIT from Keene, New Hampshire, which was a very restricted, white, mostly I would say about 65% Protestant 30% Catholic area, and to come into an international school like MIT was an eye opener.

It was probably the best experience just to be here, to meet people from all over the world and realize what the world was really like. Unfortunately, in that isolated corner of New Hampshire [that I was from], I experienced a great deal of anti-Semitism. I never went back to a high school reunion because of that.

The high school there did its best, and they sent kids to good colleges, in some cases. The year I graduated, one student went to Yale and a couple went to Dartmouth. I know that some of the other league colleges were represented also. But for me it was that my father had to make a living, and that's where he could make his living [in Keene]. He had small business, and I didn't realize what my family's financial state was until I became executor of their wills and realized that he basically lived from bank loans to bank loans, always repaying them, having an excellent reputation for his being a good person and being an honest person.

Anyhow, I think that going to MIT was the biggest experience of my young life. The Jackson Lab was also a wonderful experience, but it was for a much shorter term. I've gone up there maybe a couple of times for their reunions, but at this point at my age, I can't do it. I do contribute to them. I contribute to MIT, and I contribute to a couple of Boston hospitals that I feel were helpful to me. You know, I feel that if you can give back something, that's good. Even if it's what you can afford and it's not a lot, it's still something.

I think that meeting people from such different backgrounds was probably as much a part of my education as the academics. I was glad I had the chance.

KLINE: Well, I want to thank you for taking time to speak with me about all of this.

GILSON: Of course. You're welcome.