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Interviews of the Margaret MacVicar Memorial AMITA Oral History Project

Paula Hammond– Class of 1984

(interviewed by Shawna Davis)

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DAVIS: Can I have some background information about you?

HAMMOND: I was born in Detroit Michigan in 1963, which was in the middle of the Civil Rights Movement, just a few years before Martin Luther King was shot, and the same year that John F. Kennedy was shot. I was born two years before MLK's murder, so the setting was a time of a lot of change. Detroit is a city where a large number of southern black families had immigrated during the 1940s and 1950s to work in the auto factories. My mother is from Claremore, Oklahoma and was raised in Little Rock, Arkansas, where her family lived. Some family members moved to Detroit. She came to Detroit to complete her nursing education and begin work as a nurse. My father is from Greenville, S.C. He went to college at Xavier University in Louisiana and then went up to Detroit to get his Ph.D. at Wayne State. So both my mother and father are highly educated. My mother has a master's degree in Nursing from Howard University. Before she went back to Detroit to live with her family, she got her nursing career started, and my parents met during that time period. They actually got married and had us (myself and two brothers) during a time when things were very much focused on Civil Rights, and education was very much part of the message my parents emphasized growing up. I grew up in Detroit at a time when our neighborhood went from white to black, so I remember a little bit of it when it was white and a lot of it when it was black. I grew up being asked why I speak the way I do and usually it was in the form of; "Why do you talk 'white'?" I had that sort of anomaly of talking like my parents and being told I spoke 'white.' It was a little bit different, but really a rich experience growing up in Detroit because Detroit had lower income, middle income, and wealthy blacks. The whole panorama of black society lived and thrived in Detroit at that time.

DAVIS: What made you want to go to college?

HAMMOND: Well, several things. First of all, there was not really a question of whether I was going to college. I don't think there was ever a reality in my mind that I wasn't going to college. My parents were intent in the way that my brothers and I were raised that college was part of the plan. They were in their first generation of going to college, and they made sure their children were going to college. That being said, I knew I wanted to go to school to study something and when I was younger I was really interested in reading and writing. I wrote short stories and things of that nature and I was interested in being a

writer, so I wanted to go to college for that. However, in my junior year when I took chemistry, I got so fascinated with it that my chemistry teacher, who happened to be a woman—which was not as common at that time—suggested I look at chemistry or chemical engineering. Also, my father got a PhD in biochemistry, so there was some science in the family. My mother went on to become the Dean of Wayne County Community College's nursing school. It turns out that Wayne County Community College was started as a result of the riots of 1969 to create a Community College in the city of Detroit where there were a large number of Blacks living. So as that was being formed in 1967 and 1968, she became a consultant and eventually became the Dean of the Nursing School. So the idea of not being in college was very distant.

DAVIS: When did you realize that you wanted to go to MIT?

HAMMOND: After I decided I was interested in chemistry and decided I was going to check out chemical engineering, I started looking at what schools were really front and center when it came to engineering. Engineering at that time was really suffering from the low number of African-American students and so there was a lot of information out there. I saw MIT being mentioned in different contexts, even in my science textbook. I thought this is a place where people go, and I had heard of it before, so I knew it was a place where science and technology was at the core. I applied to several schools and when I came to visit MIT, that visit sold it. I felt like I was at home at MIT.

DAVIS: Who were your mentors?

HAMMOND: I would count both my mother and my father because they definitely provided a lot of guidance, and I know all children are different, but I was kind of a "listener kid," so I would absorb a lot of advice from my parents. The teacher that I mentioned in chemistry, Mrs. Herr, was also a major influence on me at that time, and my biology/physics teacher too. I also had a best friend, and although we weren't mentors, our peer relationship supported us throughout high school because at that time, we were one of the few kids that had that sort of way of speaking. We were really into the books and really engaged in classes when other people weren't. We went to different high schools, but we stayed in touch and continued to support each other.

DAVIS: Was it unusual for a person in your neighborhood to go away to college?

HAMMOND: In my neighborhood, it was not unusual. There were actually different family norms. In Detroit, there were a lot of families that were making

a lot of money from the auto factories, so kids from those couples, some of them went to college and some of them didn't. At that time a lot of families had different perspectives on college education. Some thought you would need a specific reason to go to college. Others would suggest, "Why don't you work at Ford, GM, or Chrysler" and you could actually get a very high paying job. Your hours would diminish as you got older and a number of people would even retire early. On the other hand, there were neighborhoods that were filled with sons and daughters of doctors, lawyers, and engineers, and they were professionals, so for them go to college was the norm. So my neighborhood was very much mixed together.

DAVIS: Where did you live on campus? Was there self-segregation by gender or race?

HAMMOND: When I moved on to campus at MIT 1980, I moved into McCormick, the all girls' dorm. At that time, I would say about half of the African American students in my class moved into McCormick, and the remainder lived in East Campus and New House. By the way, there was not a New House 2 black majority; there was just a New House 1 (Chocolate City). Also, Next House opened while I was an undergraduate, so some students lived there.

When I was in a small Catholic all girls' high school, I had a group of friends representing every race. I went from K-8 in a neighborhood that was an all black neighborhood to a small catholic sequestered high school with very high value education. My class size was forty, and we were the big class. The average class size was twenty-five to thirty. So we felt like minorities, but each class would have about 4 black people. Then I went from that to MIT, and I dived right into a strong African American setting. Although I wasn't in Interphase, the week that I came in, I immediately met everyone who was in Interphase, and there was a kind of pseudo-merging of people during what was then called "Rush (RO) week," and we then spent a lot of time visiting all the dorms together. When people chose rooms they ended up choosing them together. I already had my group of friends by day 6, and by then I was already a member of the Black Students Union (BSU) and National Society of Black Engineers (NSBE). So we tended to self-associate. I lived on the 3rd floor East at McCormick. Some of my close friends lived on 6th West and 7th West in triples.

DAVIS: Can you estimate how many black women were in your class?

HAMMOND: I think the total number of black students in my class at MIT was around 40, and the year before us was 35. Out of that group of 40, we were probably around 15 black women.

DAVIS: Were there issues with retainment?

HAMMOND: Most of the black women in my class did graduate. Some of them graduated a year later; however, we did lose some black men.

DAVIS: Did your high school have you prepared for MIT?

HAMMOND: I feel like my high school education prepared me 90% for MIT in several ways. I had the studying thing down. There was nothing that shocked me about the quantity of work because I went to a high school that nailed you with homework. Everything related to the arts and literature was easy for me, but in terms of math, when I was in high school I did not take calculus. When transferring from my first school to my other school, I ended up my senior year taking pre-calculus instead of calculus; it would have been a lot easier for me if I had had calculus. The sciences were fine, but physics was kind of tough.

DAVIS: Were the faculty at MIT welcoming?

HAMMOND: When I was a freshman, my awareness of the sense of welcoming from the faculty was fairly small. I think I was more aware of the need to almost not being noticed. At that time, I had the mindset of, "Let me survive" and "I'm scared." With that said, I was more aware of my fellow students than the faculty. The faculty, at that time, were rather amorphous objects in front of the room explaining things, but there were students that had attitudes and would give off the air of "You're here and I know why you're here" as opposed to "How did you do on that exam" or "Let's exchange information." It was not common for me to be approached with questions like, "Did you find X, Y, or Z hard?" or "What did you think of that last p-set." As I entered my department and I got more involved with my department's classes, it became more about what was going on in the classroom, and there was a little more letting go about whatever was assumed about you.

DAVIS: How was your social life at MIT?

HAMMOND: In the first couple of years, I was going to parties, such as the ones held at "Chocolate City." I pledged Delta Sigma Theta Sorority, a national public service black women's sorority group. Delta's had parties, AKA's (Alpha Kappa Alpha - Also a black national sorority) had parties, Alpha's (Alpha Phi Alpha) had parties, Kappa's (Kappa Alpha Sigma) had parties, and so did the Que's (Omega Psi Phi). So there were a lot of parties at frats and there were a lot of things at Northeastern University related to the fraternities and sororities

because the older chapters existed over there, and therefore step shows, etc. were held at Northeastern. There was never a moment when there was not a social activity to do. Always, it was my job to decide whether I could partake in the social activity that was going to happen. Even Harvard and Wellesley had parties.

DAVIS: Why do you think Greek life is no longer as prevalent?

HAMMOND: That's interesting because my pledge year line was a total of seventeen people, which consisted of students from Harvard, MIT, Bentley, and Wellesley. Five of us were from MIT. The AKA's were pledging at the same time, and they had about five from MIT as well. So ten black women in one year is a lot, so it definitely was a stronger preference. It might not be as prevalent now because when I pledged we were the second line and we were following rules that really emphasized not having heavy pledging. I think this is something that our organizations learn, grow, and deal with, but I think to some extent that the more that pledging activities go back to the roots, the more difficult it is for students to survive class. You cannot lose your entire evening everyday of the week and think that you will still be here. When I was pledging, our line was active. We did stuff, and we worked hard and studied together. It was a lot. My grades did fall that term, but it wasn't like I was about to teeter off the edge. I think that appropriate level of pledging has to be learned again if we want to increase the numbers. These are young people that would contribute significantly to these organizations; their perspectives, their minds and their hearts would be incredible contributions. If we want to keep that, we need to have an understanding that if they are dedicating time to this organization, then we are already halfway there. I think that is one of the biggest reasons. I am sure there are smaller ones as well. Other reasons could be funds and accessibility to be visible with ease on MIT's campus.

DAVIS: Did you face any challenges at MIT?

HAMMOND: Freshman year, my challenge was convincing myself that I belonged here. Everyone comes here a little bit weary, but a lot of people come here with a fair level of confidence. I tend not to be the over confident type, but I arrived thinking I didn't have the calculus. I thought, oh my God, I'm really going to have to work hard to belong here, and maybe they shouldn't have admitted me. So I had to get rid of that attitude. Going through the first year, getting through 18.01 and 8.01, and believing I would come out whole were challenges. I also was young. I was 16 and I turned 17 in September of that freshman year, so I was like, "all right, I have to prove I can make it here" and that was a challenge. At that time, I felt like I was walking on a ledge and I could

fall down at any moment. When I pledged Delta, trying to be present there and present in my classroom was also hard. I had people that helped me, there was a woman named Lynda Jordan, she actually came back here as a MLK scholar later, she was a grad student in chemistry and happened to be a Delta. She was my TA in my chemistry lab, which was a hard lab, and she was very encouraging. I think she was the only black TA I ever had during my entire MIT undergrad experience. First term freshman year and first term sophomore year were tough, but after that I came back in the second term of sophomore, and I really focused on my work. I got through 10.301, one of the harder course 10 classes. The beginning was weak, but I sort of pulled it back up and I thought, "this is not going to be happening, I'm going to live it, think and feel this stuff and nothing is going to get in the way!" Turning that class around helped me cope, and the rest of MIT, I stopped questioning whether I belonged there.

DAVIS: Did MIT teach you any particular skills?

HAMMOND: I definitely developed the ability to solve problems and think analytically, all of that good technical stuff. I also learned a huge amount in terms of communicating with other people. I learned about leadership. I did join a number of organizations at the time I was at MIT. I learned to speak up. I was a fairly quiet person. I tended toward shy, and in that environment I learned quickly to say what I thought and just push it if I thought it needed to be pushed. I learned about the political side of things. When I was a student, I didn't frequently have the experience of people coming up to me personally and vocalizing their feelings about race and gender. It was more likely the situation of sitting with friends and knowing there is a general attitude coming from everyone else, being chosen last as a lab partner, or the general surprise expressed by people when they realized you were doing well in your classes. However, as a group we would experience a lot of racism. There would be letters in the Tech about why affirmative action is so wrong. Random kind of things like that happened at MIT, and we knew that people looked at us as either exceptions or lower quality than everyone else. So politically, I learned how to speak with regard to us as a whole.

DAVIS: Can you give me a brief timeline of your life after college?

HAMMOND: I graduated in 1984 with a Bachelor's degree in Chemical Engineering. I was engaged at that time to another Mechanical Engineering student at MIT. We moved to Fort Lauderdale, Florida. I had a job as a process engineer at Motorola, working on the micro fabrication of the semiconductor chips used in their pagers and cellular phones. I was in the communications sector and after 2 years as a process engineer

there, I realized I didn't have any way of engaging in the process except to fix it. I was tired of working on the frontlines and not having time to think about how to improve the larger picture. I had always been interested in chemistry, and polymer science was the part of chemistry that really got me excited. So we moved and my then husband, John Hammond, got his MBA at Emory University in Atlanta, so I got a job at Georgia Tech Research Institute, which is like Draper Labs or Lincoln Labs at MIT. It is a contract research group that is Georgia Tech based. While I was working there I got a Master's degree in chemical engineering at Georgia Tech. After that for two years, my then husband and I moved to Cambridge where I had become aware of a Program for Polymer Science and Technology (PPST), which still exists now. The program had just been started, and it allows you to focus on polymer science early in grad school and later go back and take the courses that were core to your own department. I originally wanted to get a PhD in engineering, but in the polymer science program, I could spend my first year doing polymer science classes. I could take my qualifying exams on polymer science and then I could go back and take the core chemical engineering graduate courses while I was doing my research. So I did that, and I was allowed to choose an advisor outside of my chemical engineering department. My advisor was in material science; his name is Michael Rubner. He is still here too. In his group, I synthesized polymers that underwent changes in their color when you applied strain to them and with temperature. In that work, I learned how to synthesize and design polymers. I finished my PhD, and I had already decided I wanted to be a professor. So I started talking about academia throughout my graduate degree. I applied for faculty positions as I was leaving my PhD, and MIT asked me to interview. I thought it was a long shot, but MIT gave me the offer. I did a postdoctoral study at Harvard, and that was in their chemistry department with Professor George Whitesides. There I did a lot of work on electrochemistry and surface chemistry. I came back to MIT as a professor, having completed my postdoc, and I combined those two experiences to build my research program. During that time, I separated and divorced from my first husband, and I have one child, James, who is now 19. I remarried in 2000 to my current husband Carmon Cunningham. I had a five-year period as a Professor, as a single parent and then as a newly married parent. I got tenure in 2002 and full in 2006. Now I am the Executive Officer in Chemical Engineering, which is the Associate Department Head, and as such, I have the administrative role of running the undergraduate program in the department, teaching assignments, and research space assignments for our faculty. I also work closely with our Department Head with things like faculty searches and future planning.

DAVIS: Do you think the workforce is now more accommodating to women?

HAMMOND: Yes, the workforce is better at providing an environment where women can thrive, but it needs to change more. It's a process in which things have certainly evolved. When I first began working as a process engineer at Motorola, I experienced a huge amount of attitude at women engineers. My department had two women previous to my hire, and I was asked if I would be the woman that survived them. I was there for two years, and that was the longest that a woman had lasted there. While working there, I was the only woman there for an eighteen months period, and there were rumors of jokes about women engineers when no women were present, told by our supervisor. There were also some strange remarks about race, which were more uncomfortable than funny. They invited my husband to join at an outing and they said, "Let's see how much a black man can drink." I had several eye opening experiences in Florida. Even though I grew up in Detroit, which is a pretty rural place, I hadn't seen the completely unpolished side of things until Florida and Georgia. There were six black engineers at Motorola all together. The performance evaluations were completely stilted. You know something is stilted when you come in even with someone and that person is given favored projects and then reviewed favorably while you're given sort of dirt projects. I also had a major presentation to give at work, and I left my slides out and one of the other senior guys switched them around. When the meeting began and the slides started showing up completely out of order, I couldn't speak and could tell that the ones giggling and laughing were the ones who did it. In Atlanta, someone told me how he wasn't going to vote for Jesse Jackson and how he was a problem. Then he went into how Blacks ruined his private school when they were allowed in.

DAVIS: Have you had any conflicts between career and life?

HAMMOND: In general, I always tried to make everything work, and it is possible to have children and a life. One of most important things is being able to make sure to make decisions when you feel it is the right time. I had James in my 3rd year of graduate school, which is not a normal time, but it is more common now. It requires that you know that your advisor is a supportive person. The two things most important were surrounding myself with supportive people and resources. Because we had graduate residence at Burton Connor, we had a lot of baby sitters around. We weren't paying rent and that went to childcare. Finally, the person you choose as a life partner, especially as black women – we tend to think that we should allow a certain amount of give and compromise. Marriage should be a compromise, but there are things that should be understood at the beginning of a marriage or it won't work. I think part of that is what is your ambition, what do

you want to do. Women need to know that their spouse is someone who will support them.

DAVIS: Any next step?

HAMMOND: I'm still thinking about my next step. There are some options and things that I consider but not exclusively. Continuing along the research path that I am on now; I'm getting involved in the Koch Institute for Cancer Research. There is a lot of really exciting work coming out of some new collaborations. I want to see some of my materials systems translate into commercial applications. This company founded by one of my students that is based on the patent from my group, I want to see that succeed. I am on the advisory board for that. I am interested in some level of leadership down the line at MIT more than likely, possible elsewhere, but I'm not necessarily in a rush for that. In the end, I am interested in leadership. I am also interested in science policy and how the government engages with science. These are all options, but right now I'm seeing what opportunities come along.