Interview with Otis A. Shelton
Conducted September 21, 2015
Edited transcript

About Otis A. Shelton:

Otis Shelton's leadership in AIChE spans the breadth of Institute activities. His leadership as a Board Director (2000–2002) and Secretary (2004–2006) was instrumental in helping to guide the Institute during a challenging period. He served as AIChE President in 2014, and continues his service on numerous AIChE committees. He is also a member of the AIChE Foundation Board of Trustees, where he is a member of the steering committee for the MAC Endowment Fund.

Shelton received his BS and MS degrees in chemical engineering from the University of Houston. In 1967, he began a lengthy tenure at Union Carbide Corporation, with assignments in manufacturing and management. At Union Carbide's New York City headquarters, he served as a business analyst for the silicones/urethanes intermediates business before transferring to the company's headquarters in Danbury, Connecticut, as Manager of Financial Analysis. In 1986, he helped lead the development and implementation of a corporate Health, Safety and Environmental Audit program that provided in-depth assessments of Union Carbide's worldwide manufacturing facilities. In 1992, Shelton joined Praxair, where he led the Safety and Environmental Assessment Program for the company's facilities worldwide. He directed the program until his retirement in 2012.

The following interview was conducted by Gordon Ellis, AIChE Communications. Video extracts from this interview are available in the Minority Affairs Committee's archives.

GE — We're happy today to have with us Otis Shelton, who is an AIChE Fellow, the immediate past president of AIChE, and a long-time AIChE Board member as both a director and secretary. He led the environmental health and safety assessment program at Praxair, where he worked from 1992 until 2012. And he's also one of the honorees at the Minority Affairs Committee's Pioneers of Diversity awards, this fall in Salt Lake City. Thanks for being with us.

To get us started, how did you choose chemical engineering as a course of study? Were there problems you wanted to solve? Why was that interesting?

SHELTON — Well, I always had an interest in chemistry since childhood at six or seven years old. I enjoyed working with chemicals. I made my own lab. And so, I pursued this interest in chemistry from high school to my first year in college — and there I entered a work-study program, in which case I got an opportunity to work in a chemical plant … and a chance to see the type of work chemists perform versus that of chemical engineers. I found out I really enjoy applying chemical engineering principles to manufacturing, the production of chemicals. So,

that's one of the main drivers I had for becoming a chemical engineer. I thoroughly enjoy my profession. .

GE — And where did you do your studies?

SHELTON — At the University of Houston. I received a BS degree in 1967 and a Masters in 1970, both in chemical engineering.

GE — And around 1967 you also started your career in industry at Union Carbide, is that correct?

SHELTON — Yes, that is correct. I worked while completing my Master's Degree.

GE — Was it around that time that you first made a connection to AIChE, or did that come later?

SHELTON — It came a little bit later. Immediately after graduating, I did attend some local AIChE meetings, during work, off and on for about ten years. But it was really when I transferred to Union Carbide's World Headquarters in Connecticut, and I was asked to help revitalize the Fairfield County (Connecticut) Section, which has now morphed into the Yankee Clippers. I got involved and found that it was really an enjoyable experience, working together with other chemical engineers, and helping the local section get reconstituted and reinvigorated. And that's how I first got involved in AIChE in a major way.

And, I encourage other chemical engineers, if you're living near a local section that is not active, to please reach out and help. Local sections are a wonderful opportunity to get involved and it's a lot of fun to help reinvigorate them.

GE — Then, eventually, you made a connection with the global organization. Do you remember when that was?

SHELTON — After a few years of working in the local section, I got the opportunity to attend the national meetings, and to participate in some of the national initiatives — such as looking at AIChE's organization structure, and also the strategic plan process. I was involved, in a very minor way, in the current structure we have, with the creation of the operating councils in the late 1990s. And so, that was one of my first exposures to national AIChE activities. And from there, I had more participation in the Societal Impact Operating Council (SIOC), and then on to Board director and secretary, and then president.

GE — And I know that you were first elected to the Board of Directors in 2000. When did you first become aware of the Minority Affairs Committee?

SHELTON — It really started as I became more involved at the national organization. In my involvement with SIOC , I started participating in MAC meetings. But also, as a director, and as secretary, and as president, I always viewed the Minority Affairs Committee as a home within AIChE. Because they're addressing some of the same issues that I faced as a young engineering student, as a young professional. As I want to stay current with the issues minority engineers are facing, this also allowed me to provide support.

GE — So, going back a little earlier, as a young minority engineer in the 1960s, what was the climate like?

SHELTON — Well, it was quite a challenge. There are a lot of factors that prevent young minority students from becoming engineers. And the first one was financial. My parents were not able to afford to send me through college. And, because I had excellent grades in high school, I was able to get into a work-study program, and, with this, obtained financial resources to help cover the expenses. It was also an environment in which I was "one of the few," I think, maybe one or two minority student in my chemical engineering class. But in my experience, for chemical engineers, even back in the 1960s, race was not a big issue. The difficult curriculum we faced together made us a sort of fraternity. And we were all accepted. We worked together, long hours, sometimes overnight, on our numerous assignments. So, in retrospect, I found that the chemical engineering academic community at the University of Houston was open and supportive.

But, there were many cultural barriers. Segregation was still common practice. In my first job, I was one of the first black engineers in the plant. And so, working with operators in a manufacturing operation, it is very important, to gain their confidence and work closely together to meet our goals. So, I had to learn to work with operators, and the operators had to learn to work with me. We both learned. And this is a key part of being a chemical engineer. It's not only the technical side, but also the interpersonal skills that are a big factor in getting things done.

GE — Did you interface socially with some of the Minority Affairs leaders within AIChE, during the 1990s or during your years on the Board?

SHELTON — Yes, and as I said earlier, MAC was really a home-within-the-home of AIChE. That was the place where we could always get together and talk, and discuss problems we face in our profession and how to address them. The committee is critically important, in my opinion, for both young minority engineers, as a practicing professional engineers. And so, staying close to MAC was important to me, personal, as well as ensuring that AIChE's leadership vision for MAC was being realized.

GE — Well, having observed the committee over many years now, where do you think MAC has made a particular impact?

SHELTON — Well, I have to say that MAC supported me in achieving success as an AIChE leader un the role of director, secretary, and also president of AIChE. I don't think it would have been possible without MAC. MAC has contributed quite a bit through scholarships. They have given more than 370 scholarships in the past 25 years. And I've participated from the standpoint of attending their meetings, evaluating some of the scholarship candidates and also making contributions. MAC has played an important role over the years. As I mentioned earlier, a lot of minority engineering students don't have the financial capability of going to a university, even if they have an excellent educational background. Providing scholarships to deserving students is a very important role for MAC.

Another important role MAC has played is in K–12 outreach. I've had the opportunity of participating in the outreach efforts at some of our Annual and Spring meetings, and have seen the faces of the young high school students, seeing minority engineers. I can see and feel value we add by encouraging them to become engineers — you can tell that some of the students had never even thought about that possibility.

GE — You mentioned the scholarship program. You're on the steering committee of a new AIChE Foundation initiative called the MAC Endowment Fund. What is that about?

SHELTON — Basically, we're trying to raise funds to ensure that we have perpetuity for the scholarships in the future. MAC scholarships have been primarily financed by the Foundation, and in the past through voluntary contributions when members pay their AIChE dues. In some years we had sufficient funding; in other years we did not. And so the scholarship coverage varies from year to year. So, we'd like to put in place an endowment fund that will provide these scholarships on an annual basis. We're aiming to raise some $300,000 over the next three years, to endow this MAC scholarship fund to provide 15 MAC scholarships each year.

And this is very important. I think engineering provides a unique ladder for minorities to climb up from a lower economic level to a higher economic level. And financial scholarships provide support to help them move up that ladder. If you didn't have the financial support, it would be very difficult for many of them to climb that ladder and become chemical engineers. To me this is very important. And I encourage all my friends — chemical engineers, minorities, *all* chemical engineers — to please help us in this endowment. It's an investment that you'll never regret.

GE – How can AIChE members make that support?

SHELTON — Mainly by contacting AIChE staff at the Foundation, to say that you'd like to make a contribution to the MAC endowment fund. There will be a lot more information regarding the MAC Endowment Fund available at the 2015 Annual Meeting.

GE — Well, as we conclude, do you have a vision for MAC in the future? Or, where do you think MAC could do more work to improve the inclusiveness of the community?

SHELTON — As AIChE president and as past president, I've had the opportunity of traveling to Brazil, and also to South Africa, and also more recently to Nigeria. And I see a lot of chemical engineers who are in similar situations to what we have in the U.S. They're struggling, and they're facing barriers preventing them from becoming chemical engineers. And I think the MAC model has worked well in the U.S., and so, the vision I see is perhaps take this model and apply it in different regions around the world. I don't see why the MAC model couldn't work in Nigeria, couldn't work in Brazil, couldn't work in South Africa, and other places. So, I think it has a tremendous opportunity for helping the world in many ways.

GE — Well, as we wrap up, do you have any closing comments about the MAC anniversary or the Pioneers of Diversity Award honorees as a group?

SHELTON — I really have a lot of respect for those pioneers of diversity within MAC. I know some of these people personally, and I've seen them working throughout the years, and being there for MAC. I see their dedication and leadership, year after year, and the service and support they give to AIChE members. So, I have the highest of respect for them.

And I just want to say thank you. Thank you very much for all your dedication and support and for making it possible — so that more minority engineers can become chemical engineers. Thank you.

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