Scaling the Heights of Architectural Academe

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CHICAGO — If you ask most architects to name the 20th century titans in their field, people like Frank Lloyd Wright, Le Corbusier, Ludwig Mies van der Rohe and Frank Gehry will no doubt be on the list. The only people of color likely to be mentioned are I.M. Pei, Minoru Yamasaki and maybe Tadao Ando. It is doubtful that you'll hear the names of any women.

David Sharpe, an African American protégé of Mies van der Rohe, is an exception to the White, male image of people his field. Together with Dr. Mahjoub Elnimeiri, a structural engineer from Khartoum, Sudan, Sharpe hopes their work is not only enhancing the specialty field of skyscraper architecture, but that the presence of people like them can inspire students of color to pursue careers in skyscraper architecture.

Sharpe's interest in drawing students of color into the field derives less from a concern about what their cultural backgrounds might bring to the profession, than about giving them a chance to enter an exciting and rewarding career.

"People today have a tendency to believe that your heritage has something to do with your architecture," Sharpe says. "In the classical sense, that is true. If we build upon the knowledge that we've accrued to do a better job with the materials available to us, then that is what we should do."

Function Matters

Sharpe's comments are not surprising considering he has spent the last 37 years teaching at an institution specializes in designing skyscrapers and long span buildings that emphasize function over form.

The Illinois Institute of Technology began distinguishing itself as a haven for master skyscraper builders in the mid 20th century when it was under the direction of Mies van der Rohe. Considered the father of steel and glass skyscrapers, Mies, as he is called by people who knew him, was notorious for his belief that "less is more." His architectural achievements include the famous Seagrams building in Manhattan and many of the buildings on the Illinois Institute's campus. Mies van der Rohe was the director of the department of architecture from 1938 — when the school still operated under the name the Armour School of architecture — until 1958.

Sharpe first came to the Institute in the 1950s, after earning a bachelor's degree in architecture at Tuskegee Institute and serving a tour of duty in the U.S. Air Force. He studied for his master's under Mies van der Rohe and Myron Goldsmith, another Mies protégé on the institute's faculty.

Upon graduation in 1962, Sharpe went to work with Goldsmith at the prominent Chicago architectural firm of Skidmore, Owings & Merrill. Sharpe also began teaching as an adjunct professor of architecture at the institute.

Sharpe and Goldsmith eventually led the effort to expand the department into the College of Architecture, Planning and Design. They also spearheaded a transformation in modern architectural research away from theoretical graduate projects and towards real-world projects. Sharpe left his associate partner post at Skidmore in 1982 for a full-time position at the institute, where he is now the director of the graduate thesis program.

Elnimeiri came to the institute as a full professor in 1990, having completed his masters in structural engineering at London University, and a Ph.D. in structural engineering from Northwestern University. Before accepting the faculty position, he also had worked with Sharpe for 12 years at Skidmore. Though not an architect, Elnimeiri's expertise in structural engineering made him an attractive asset to the IIT faculty.

"We believe that structure is very important in architecture — especially in tall [buildings]." Sharpe says. "Structural engineers know what to do, so we have a structural engineer on staff. [Elnimeiri] is not teaching students architecture, he teaches them how to make sure their designs will stand up."

According to Sharpe and Elnimeiri, students at many other architectural schools are taught to focus on building design based on ancient models of structure and classical concepts of building design, which focused almost exclusively on beauty, color and form. The problem, they say, is that many people in architectural academe lack the practical experience needed to inform their research.

"Not enough attention is being given to teaching the value of drafting practical construction documents for functional, permanent structures founded on sound engineering principals that are relevant to today's uses as well as are aesthetically appealing," Sharpe says.

Elnimeiri agrees: "Students are coming out of schools not knowing how to use materials to construct buildings centered around a solid understanding of the effects of the environment and energy on building materials and structure."

The institute's reputation for having professors with real-world experience is one reason the Hyundai Engineering and Construction Company of Seoul, Korea, came to the institute in the fall of 1996 seeking help with its Hankang City multi-use development project.

"They were looking for educational and research services based on the reputation of our high-rise studies, both in practice and in education," Sharpe says. Elnimieri, Goldsmith and Sharpe worked on the Hyundai project between 1996 and 1997.

"We did the research, design and development of the tall building on the project," Sharpe says, recalling that he and his colleagues treated the Hyundai engineers and architects much as they would their own graduate students.

It is the ability to conduct research on projects such as this that makes Sharpe prefer being a part of the academy over working for an architectural firm.

“I’m not in the race for how we can do the tallest building in the world.… It is the research and my interest in how we can do things better [that excites me],” he says.

Drafting a More Colorful Future

As concerned as Sharpe and Elnimeiri are about the lack of practical training offered by most architectural programs, they also worry that there will be no Black scholar-architects to replace them when they retire.

A 1996 University of Cincinnati Department of Architecture’s Center for the Study of Practice survey reveals that less than 2 percent of the nation’s practicing architects — or 2,000 out of 150,000 — are African American. Another study conducted in 1997 by the National Organization of Minority Architects corroborates this statistic and shows that the percentage of Blacks entering the profession has stayed the same during the 14-year period between 1983 and 1997.

According to the National Architectural Accreditation Board, there were 2,837 graduates of accredited architectural bachelor’s programs in the 1994-95 academic year. Of these, 144 (5 percent) were African American. In the 1998-99 academic year, there were 2,617 baccalaureate degree recipients overall and 131 (5 percent) were African American (see table pg 26).

At the master’s level, in 1994-95 there were 1,629 graduates in 1994-95 — 28 of whom (1.7 percent) were African American. In 1998-99, there were 2,002 overall — 40 of whom (2 percent) were African American.

Elnimeiri attributes the dearth of minority students in architecture programs to several factors, primary among which is the lack of financial aid. Sharpe agrees, emphasizing that “students who don’t receive enough funding to pay for their education usually need to work. Those jobs often detract from their educational experience by taking time away from their studies.”

One reason why there is such a disparity in the number of Black students earning bachelor’s degrees vs. those earning graduate degrees is that only two of the historically Black colleges offering accredited architectural programs award the master’s (see Architectural Studies, pg26).

Elnimeiri cites other institutional challenges to minority success in architecture, notably, absence of mentors and academic support.

“[Minority] students,” he says, “need someone to give them the attention they need to help them get where they’re going.”

He further believes that if students of color are well supported while they are in these programs, they will graduate believing they can succeed in structural engineering or architecture careers.

Recruitment into graduate institutions is another issue. When asked if IIT has ever pursued formal partnerships with undergraduate programs that produce relatively large numbers of African American graduates, Sharpe says he isn't aware of any formal program, but the institute has accepted students from Hampton, Howard, and Tuskegee universities. And while Sharpe has occasionally lectured on the campuses of a few historically Black colleges, he says he hasn't really had time to help develop partnerships with these schools — not that he has ever been asked.

The extent of Sharpe's outreach has largely been limited to supporting the efforts of students associated with the National Organizatgion of Minority Architects chapter on the IIT campus.

The Faculty Dilemma

Given the scarcity of African American students in architecture, it is no surprise that the ranks of Black faculty are also rather slim.

First of all, it is rare for architectural students to pursue the doctorate in architecture, unless they have the intention of teaching. Even then, Sharpe says, many will opt to obtain practical experience at an architectural firm and perhaps get a doctorate in a related field such as art history or engineering. Of the 112 colleges and universities in the United States with accredited architectural programs, only 20 award Ph.D.s. As a consequence, many of the senior faculty members at architectural programs around the country do not hold a terminal degree.

The Illiniois Institute recently launched its own architectural doctorate program, run by Elnimeiri. The program focuses on construction methods, new materials, experimentation and numerical analysis.

In order to practice architecture professionally, architects must pass the Architecture Registration Exam given by the National Council of Architectural Registration Boards. There are two levels of exams — one for students who've completed baccalaureate study in the field and another for those who've obtained a master's.

"In order to teach, many schools — like where I teach at Clemson — require a license," says Raymond Huff, a professor of architecture at Clemson University who also runs his own private practice in Charleston, S. C. "Most schools, however, do require [instructors to have] at least a graduate degree — whether you're tenured or adjunct."

Thirteen states also require practicing architects to take additional continuing education classes to ensure that their skills and knowledge remain current.

Of the nation's 1,869 full-time architectural faculty, 82 are African American, according to the accrediting board. Another 42 Black faculty members have part-time status.

One of the disadvantages to having such small numbers and being so disbursed around the country, is that many of these Black architectural faculty don't even know their Black colleagues.

“I’ve never heard of either [Sharpe or Elnimeiri],” Huff says.

For the most part, the two IIT scholars hope their role modeling of success, despite the obstacles, will serve to inspire young Black students to take their place in the academy.

“What happens is that many [Black architects] generally get absorbed into these large firms,” Sharpe says. “Like you never heard about Mahjoub or me. We’re just out here doing our thing as best we can.”

— Cheryl D. Fields contributed to this story.