

Alumni Spotlight: Bonnie Harken '64, Architect, Environmental Designer, and International Consultant

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Photo credit: JLS Photography, June 2023.

Bonnie Harken '64 is a pioneer in sustainable waterfront revitalization (which basically means that she makes run-down, urban waterfronts look much, much cooler). She studied environmental design at Parsons, real estate finance at NYU, and architecture at Columbia. Bonnie is the founder and president of Nautilus International Developing Consulting.

In this month's "Alumni Spotlight," Bonnie recounts her family's experiences before arriving in South America, shares her ideas on how to prepare cities for the future, and reveals how the military dictatorship in Brazil threw a wrench in her life plans.

You lived in China, Hong Kong, and the Philippines before moving to Brazil in 1954. Tell us more about those experiences.

When people ask me where I grew up, rather than trying to explain all the places, I'll often say, "In Asia and Latin America, and my home is Brazil."

My father was an aeronautical engineer in the early days of aviation and worked throughout World War II designing bombers and other military aircraft in California, where I was born. After the war ended, he wanted to redirect his career to something more positive, so he became a missionary. His first assignment was to teach science and math in China. Shortly after my first birthday, we sailed to Shanghai, then settled in Peiping (now Beijing) for my parents to study Mandarin. As Mao's Red Army moved southward into the cities, we flew back to Shanghai and then to Canton (now Guangzhou), eventually arriving safely in Hong Kong in mid-1949. Several months later, our family was reassigned to the Philippines, and we lived in Manila for three years. When the time came for a year-long home leave in 1953-54, we traveled back to the US, making many stops in East Asia and Europe along the way. When we finally arrived in New York, I was six and had already voyaged around the world. That year, my father retrained at Columbia University as a treasurer and was offered an assignment to either India or Brazil.

Why did your family eventually choose Brazil? What was the journey like, and what were your initial thoughts and feelings about living in São Paulo?



Bonnie visited her former home in São Paulo's Jardim Paulista this April. (Photo credit: Avery Harken, April 2023)

Given the postcolonial turmoil in India, my father chose the post in Brazil, thinking it would be a more stable country. Just when we were heading to São Paulo on the *SS Argentina* with all our belongings, Brazil's President Getúlio Vargas died by suicide. I was seven years old, convinced that Brazil was full of snakes, and sad to leave behind my dog. But, by this time, my brothers and I were "ship rats," and we thrived onboard, sneaking into first class to watch movies.

We anchored first in Salvador. Brazil looked like a tropical paradise from the Baía de Todos os Santos. One of my favorite places today remains the nearby island of Boipeba. In São Paulo, my first impressions were of a friendly, lively city with warm people. We stayed in a large, old home with other missionary families near Avenida Paulista. One of the first visits we made was to Butantã, which was way out in the countryside at that time, and I was reassured to learn they had antivenoms for all kinds of snakes.

When you enrolled at Graded, the school was located on Rua Coronel Oscar Porto. How was your Graded experience shaped by your time on two different campuses—downtown and in Morumbi?

It was a great experience to have been at both campuses, and they marked different stages of my life. I enrolled in Graded at the beginning of fourth grade in 1955 after spending a year in Campinas, where my parents studied Portuguese. At the time, the elementary school was in the second building down the hill. It was a big deal to move up to the main building during middle school and get to use the upper sports fields. Joseph Troxell was steering the school as our trustworthy superintendent and Mike Beus, our wizard custodian, kept everything in order. By coincidence, Mr. Troxell's daughter, Aracy, and I were in the same class and now live across Central Park from each other.

My family lived right around the corner from Graded on Rua Mário Amaral in a small house with a walled, grassy backyard with trees and coffee bushes. The neighborhood kids used to have fun throwing coffee beans across the walls at each other when we weren't creating houses and forts on the street with the branches left over after the trees were trimmed. Before my family went on home leave again in 1959-60, construction had already started on the new campus. When I returned from home leave in the US, I attended ninth grade for the final year at the Rua Coronel Oscar Porto campus, so I had the chance to say "goodbye" to it before the school moved sites.

What a dramatic change! All the buildings on the Morumbi campus felt so streamlined, modern, and new. The landscaping was still scruffy, with lots of red dirt showing through. I remember being outdoors between classes was a joy, even when there was rain. Today, I teach a seminar to graduate students in real estate development and always take them outside on walking tours. Of course, Morumbi seemed like the middle of nowhere at the time. Our bus rides took over an hour, taking us past vacant land with wild horses. I learned to do most of my homework on the bus so I could practice music or run track when I got back to "civilization." My family also moved into a large house in Jardim Paulista after our home leave, and it felt like everything in my life had changed.

Years later, in architecture school, one of the professors had us draw the plans of our high schools from memory. My drawing of Graded got top ratings.



Bonnie (front row, fourth from the left) won medals for Graded in the 100-meter and 4x100 relay races. (Photo credit: Aquila, 1960-1961)

Today, almost 60 years after your graduation, what are your most lasting impressions and memories of Graded?

That's an easy one: my most enduring memories are of the wonderful people at Graded and the feeling of being a valued part of a close, caring community. I had so many excellent teachers and classmates. Some highlights I'll never forget are playing (and sometimes winning) on the basketball and track teams, being honored as the youngest member of the Honor Society, editing the *Aegis Review*, singing in the Mellowaires, and constantly being intellectually challenged in Math Club. When I graduated, my dream was to attend four years of college in the US, then return to Brazil, marry the Brazilian man I loved, and have our children follow in my footsteps as students at Graded.

However, those of us who graduated in 1964, just after the military coup, had no idea how the political turmoil in Brazil would affect our lives. As we went through college, we had to readjust our career and life plans in real time. Unfortunately, the coup set the stage for a long, repressive dictatorship. By the time I decided to become an architect, most Brazilian architects had fled to Europe or the US, and my dreams of returning home were lost.



FOTO: STUDIO CHADEL

AUGUSTA 2233 - SÃO PAULO

ESCOLA GRADUADA DE SÃO PAULO

INDUCTION CEREMONY NATIONAL HONOR SOCIETY

1963

Bonnie (fourth from the left) at Graded's National Honor Society ceremony. (Photo credit: Studio Chadel, September 1963)

After high school, you returned to the US to attend Carleton College before transferring to NYU, where you studied philosophy and became interested in environmental design. You eventually completed a master's in architecture at Columbia University. What sparked your interest in these fields?

It sounds like many different unrelated fields, but there's a through-line of math and creativity. I always loved math, especially the challenges we explored in the Math Club at Graded, like abstract algebra and topology. I also taught myself trigonometry from my father's old textbooks because Graded didn't offer it then. I decided to attend Carleton College because of the reputation of its math department, only to discover once I got there that the director of the department had left the previous spring, and all the best math professors were gone. While saving enough money to transfer, I took several courses in logic, the intersection of mathematics and philosophy. By the time I transferred to NYU, I had half of the credits needed for a major in philosophy. NYU had stellar philosophy professors like William Barrett, author of the existential classic *Irrational Man* and a personal friend of Albert Camus. Meanwhile, I worked my way through NYU as a legal secretary for a patent lawyer who handled some very creative inventors.

Environmental design was a brand-new, innovative field in the early 1970s, covering not only industrial design but also interior design, architecture, and urban design. My son was born the same year the seminal text, *Design with Nature* by Ian McHarg, was published, and it was a revelation and joy to rediscover the environment through his eyes. As soon as an environmental design program opened in New York, I enrolled. During that initial year, we did all kinds of assignments, which included designing a building for an environmental education center. Architecture had never occurred to me until one of my professors saw my work and said, "You're very talented. You should consider becoming an architect."

You were the only woman with a young child in your architecture program. What was that like for you?

For some reason, everyone at the time (in the mid-1970s) thought that architecture and other professions would change radically and accept women with open arms. My class at Columbia started with 50% women and 50% men (though there were only two female faculty members). I had this wonderful plan to start graduate school when my son entered kindergarten and then have a second child during the summer break between my first two years. It was a surprise that few fellow graduate students were even married and that we were all expected to work around the clock, hunched over our drafting tables late into the night. I remember the studio director looking at my baby bump and saying, "You're going to have a hard year." I'm not sure whether being a woman or a parent was harder. The attitude seemed to be: you are so lucky to be allowed to study architecture as a woman that your whole life should be devoted to your career. But some of the students and faculty were more supportive. I ended up graduating in four years instead of the standard three.

Thinking back, my multicultural background really gave me the skills to maneuver through different cultures and not to take stereotypes too personally. By the time I graduated, though, women composed less than 30% of my class. I remember one female classmate giving up in tears on the final assignment before graduation after a brutal, all-male jury review of her design. According to the American Institute of Architects, women only made up 17% of registered architects in the US in 2020.

Your educational experiences converged in the sustainable development of urban waterfronts. Tell us more about how you first got involved in this work and what it's all about.

The first time it rained after I began studying environmental design, our professors had us grab umbrellas and go outside to watch how the stormwater moved through the city. At a time when the US was just passing the Clean Water and Clean Air Acts, the program inspired me to appreciate the role of natural resources in cities.

The sustainable development of urban waterfronts is about meeting the dynamic, multi-dimensional challenges where the manmade and natural environments come together. Because waterfront projects take many years and even decades, the development process also needs to be dynamic. From the beginning, it's important to understand my clients' long-range objectives, financial resources, and immediate needs, then update those over time. The next steps are to organize the professional resources required into a strong team, consult with the public and private stakeholders involved, and manage the planning process from initial concepts and visions through detailed design and construction. Successful and sustainable waterfront developments are also based on implementation planning that includes flexible financial strategies, solid organizational structures, and realistic phasing based on powerful values that resonate over time. Today, most of Nautilus' work on the sustainable development of waterfronts focuses on planning for resilience against climate change. This year, Nautilus is celebrating our 20th anniversary, and we've now worked in over 25 countries.

What are some of the most exciting and impactful projects you have worked on?

Over the course of my 45+-year career, I've been privileged to work on projects that both impacted and were impacted by international shifts, such as the transformation of former industrial waterfronts in port cities and the global movement towards more sustainable development.

Early in the transformation of urban waterfronts, I was fortunate to work for a decade (during the 1980s) on the first phases of planning and construction for the award-winning Battery Park City, a large urban development in Lower Manhattan renowned for the World Financial Center, with over 10,000 office workers and two residential neighborhoods housing 16,000 residents. Battery Park City's success has inspired many other coastal cities and become a model of urban waterfront development worldwide. Nautilus has worked with a number of them to translate its design principles into their own cultural, economic, and environmental contexts.

One project that grew out of Battery Park City was for the General Motors global headquarters in Detroit in the 1990s for about 7,000 of their top executives. That strategic plan, inspired by the World Financial Center, not only transformed the Detroit riverfront for miles but also helped revitalize its adjacent downtown.

While my architectural and urban work has always been grounded on the foundation of environmental sustainability, I've been most excited about exchanging best practices in sustainable development internationally between developed and developing countries—such as Brazil—through research, speaking, and writing. For example, Nautilus' research work for the World Water Council (from 2011 to 2015) included a case study on *Brazil - Integrated Water Resources Management: How National Policy and Practices Support Green Growth* as one of the international best practices for protecting water resources in countries experiencing rapid urbanization and economic development. At the 2018 World Water Forum in Brasília, I

spoke on financial mechanisms to protect watersheds and how to make green transitions. In 2019, I co-authored a chapter on “Water Security and Green Growth: Supporting Development While Safeguarding Water Resources” for UNESCO’s publication on *Water Security and the Sustainable Development Goals*.



Bonnie at the United Nations Association Conference at the UN Headquarters in 2023. (Photo credit: New York, February 2023)

Some of the other meaningful projects I’ve helped lead were pro bono collaborations in the aftermath of the terrorist events on September 11, 2001, and Superstorm Sandy in 2012. After 9/11, I helped found New York, New Visions, a professional partnership between the American Planning Association and the American Institute of Architects that evolved into a coalition of 21 professional organizations. Many of its proposals for rebuilding Lower Manhattan as a vital downtown were adopted into the official plans and have benefited thousands of residents, workers, commuters, and visitors. Twelve years later, hundreds of professionals also came together after the superstorm and collaborated on the Post-Sandy Initiative – Building Better, Building Smarter: Opportunities for Design and Development. I co-chaired its influential Waterfront Working Group which analyzed the effects of future climate change on New York City. These efforts were honored with the profession’s highest recognition:

the American Institute of Architects Honors Award for Collaborative and Professional Achievement.

Today, it is exciting that the majority of Nautilus’ work on the sustainable development of waterfronts is focusing on climate change vulnerabilities and planning for resilience. Recently, as part of a multidisciplinary team, we are pleased to have returned to the southern parts of Battery Park City to help develop a resiliency plan to reduce the increasing risks from flooding and storms to public and private assets. Construction is just getting underway. On a former industrial waterfront in Queens, we are creating a vision plan for both mixed-use redevelopment and resilient public open spaces. As international exchanges resume post-pandemic, we are organizing a workshop with Danish consultants on coastal resiliency, and I am hoping to find opportunities to reconnect with colleagues in Brazil.

You were cheering for Brazil during the 2022 Qatar World Cup. (Unfortunately, that didn’t pan out the way we hoped.) How else does your childhood in Brazil still influence you and your family?

Of course I was cheering for Brazil and was heartbroken at the way it ended in Qatar!

Many of my happiest days were spent in Brazil, and having grown up there still influences me every day. My home is full of Brazilian artwork and housewares, my shelves are stacked with Brazilian books, and my favorite jewelry is made of beautiful Brazilian stones. And right now, there are 19 frozen *pães de queijo* in my freezer. I seize any opportunity I get to work in or visit Brazil.



Bonnie was the project manager for the team that designed the detailed master plan and design guidelines for the northern area of Battery Park City in the 1980s. (Photo credits: Unknown, c. 1970s / Alexander Cooper & Partners, 1988 / Bonnie A. Harken, August 2022)



I wish I could have taken my son and daughter to Brazil more often during their childhood, but the dictatorship made that complicated. During my son's first visit to Brazil, when he was one year old, I bought him a beautiful leather soccer ball and was sure he would turn into a great soccer player. Instead, he's brilliant with computers. But my daughter found the ball, neglected in the back of his toy box, and loved it. She became a star sweeper, captain of her high school's soccer team, and an incredible, lifelong Brazilian soccer fan. We just returned from two weeks in April together in São Paulo and Rio, and she loved it.

A happy note to end on is that, since early in the pandemic, a group of us from Graded's class of 1964 have been getting together online once a month. As a result, I've rediscovered many old friends. It's been wonderful to feel that instant connection we all had at Graded again.