# **Blending Music Architecture and Acoustics**

# Paul H. Scarbrough



Like many people, I never set out to make a career in acoustics, and when people ask me how I got into acoustical consulting, I literally respond "by accident." I recall two shaping influences in my early life. The first was music. My parents exposed us to a broad range

of music while growing up. Their eclectic album collection included everything from Eugene Ormandy conducting the Philadelphia Orchestra to Broadway show cast recordings to Herb Alpert and the Tijuana Brass. My mom's car radio was always tuned to WLFN, Philadelphia's classical music station (after several ownership and call sign changes now sadly just another top ten hits station). My exposure to music, particularly classical music, deepened at my high school, Archmere Academy, where Paul Clemens taught an extraordinary survey class on the "History of Music," starting with Gregorian Chant and walking us through the Renaissance, Baroque, Classical, and Romantic eras right up and into the twentieth century. So began a lifelong interest and love of classical music.

The second influence was architecture. For reasons I cannot explain, the built environment always fascinated me. One of my earliest memories is being taken to the World's Fair in Flushing Meadows, New York, New York, during its second season in 1965 and arriving in the oval waiting room of the then new Pennsylvania Station, a space that seemed grand only because as a three year old, I had no recollection or knowledge of the much grander McKim Mead and White landmark it had replaced. In early grade school, I found myself drawing plans of houses that I might build sometime in the future. Perspective drawing and drafting classes in high school fed this interest. And so, when it became time to think about college and the future, it seemed only natural that I would go to architecture school.

# A First Serendipity

While I was pondering prospective colleges, my father shared a book he had been reading, David McCullough's (1971) The Great Bridge, The Epic Story of the Building of the

Brooklyn Bridge. In his captivating narrative, I read of the Roeblings, John, Washington, and Emily, who conceived, designed, and constructed the Brooklyn Bridge. John was the original chief engineer for the bridge. Washington succeeded his father after John died from tetanus following his foot being crushed by a ferry boat during a survey of the bridge site. Emily quietly became the liaison between Washington and the bridge engineers and contractors after her husband contracted the bends from his frequent visits to the caissons used to dig the foundations for the two great towers.

Serendipity intervened when I read that Washington Roebling had trained as an engineer at the prestigious Rensselaer Polytechnic Institute, Troy, New York (see rpi.edu). Reading The Great Bridge led me to research more about "RPI" as it is more commonly referred to, and I discovered that its graduates had been responsible for a vast panoply of advances and achievements in engineering and science, from television to the moon landings. I thought that a place that had fostered such creativity must indeed be special. After considering a number of architecture schools, my parents deposited me in Troy for my freshman year at RPI. It would be a decision that I never regretted, and absent David McCullough's book, RPI might never have come to my attention.

### **A Second Serendipity**

At the end of my freshman year at RPI, J. Christopher Jaffe (see bit.ly/4gxefb9), an RPI alumnus from the

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Class of 1949, was awarded an honorary doctorate in recognition of his successful career as an architectural acoustician. Simultaneously, he was invited to join the adjunct faculty in the School of Architecture. In the fall of 1980, he began teaching an elective course in architectural acoustics. The class would meet once a week for three hours in the evening. Chris would lecture for maybe one and a half hours before he would reach his limit. He would then spend the rest of the class sharing slide images from his massive photograph collection of concert halls, opera houses, drama schools, and amphitheaters from around the world. The slides included both his work and the work of other acousticians and examples of contemporary projects as well as storied historical concert halls and theaters. We were fascinated as young architecture students, finding the thought of designing such important public buildings to be a real rush compared with the more prosaic projects that dominated our studio classes.

During my sophomore year at RPI, I was also tapped to chair a student committee that was to raise funds for a performing arts center on campus. Not surprisingly, the Institute's development office identified Chris Jaffe as an ideal prospect, with his work so intimately connected to the performing arts. Over Christmas break, two committee members, me included, joined an RPI development officer to meet with Chris to ask for his support. Chris generously agreed, giving us our first major gift toward the campaign. The meeting was a serendipitous way for me to learn more about Chris' fascinating work in acoustics. It also gave me a chance to stand out among the dozen or so other students in Chris' class at RPI. This would open a door to another opportunity in a couple of years.

## From Summer Intern to a Career in Acoustics

After my fourth year in architecture school, I was passing through Connecticut to visit a former RPI roommate and his family on my way home to Philadelphia. My friend had graduated from RPI in mechanical engineering the previous year and had gone to work for Jaffe Acoustics (later Jaffe Holden Scarbrough Acoustics and now JaffeHolden) as an audio designer. He knew I was looking for a summer job and suggested I give Chris Jaffe a call to see if he might be open to having an intern in his office for the summer. I phoned Chris and he invited me to stop by his office the following day.

After a pleasant chat, Chris attempted to deflect my inquiry about a summer internship, but instead of simply saying no, he said that the company was really tight on space. This was absolutely true because the office was split between two suites on opposite sides of the corridor serving that floor. It was an awkward arrangement, but they made it work. Now I have never been the master of the one-line comeback, but serendipity possessed me at that moment, and I responded, "Well, I don't take up much room." That turned out to be just enough to disarm Chris, and he told me to come by the following day, which I did. At the end of the day, Chris stopped by my makeshift desk and told me I could start on Monday.

At the end of the summer, I did not return to architecture school because I was having second thoughts about a career in architecture but had no clear idea what I might do instead. Chris graciously extended the internship, and a month later approached me about working as his executive assistant. I readily agreed and soon found myself immersed in the details of managing his busy schedule, coordinating meetings and correspondence with his clients, handling routine administrative tasks, and liaising with the different departments in the office. As the expression goes, it was like drinking from a fire hose, and I quickly learned a lot about how Chris had built his practice into one of the top firms in the country. Chris Jaffe was an incredible mentor who shared his knowledge and expertise generously with me.

Chris soon discovered that my RPI experiences had included significant extracurricular work in student government, including a year serving on the Executive Board, followed by a year as President of the Union. In this latter role, I effectively chaired the Board of a \$4.5 million operation, overseeing a full-time professional staff of 20 people and a part-time student staff of dozens more. Through this experience, I had gained important skills in finance, human resources, and planning, all of which Chris would put to good use as his firm moved to new offices and doubled from 10 to 20 people. Within a few short years, I was essentially managing the business aspects of the firm as vice president of administration.

In the early 1990s, Jaffe Acoustics found itself inundated with new projects. We needed to add another architectural acoustician to the team to handle the sudden increase in our workload, but there were few prospects

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out there as other acoustic consultancies were in much the same position. As we sat around the conference room table strategizing how we would try to find suitable candidates, Chris suddenly looked up and said, "Why go through all the effort to recruit someone from outside the firm? Why don't we just train him?" and pointed at me. Thus began my transition to a consulting role in the company, first by participating in design work sessions in the office and later accompanying Chris and other Jaffe colleagues to meetings with clients and architects. Soon I was given my first project to manage (the renovations to the New Victory Theater on 42nd Street in New York (see bit.ly/3TEV3y6), and within a few years, I had a full roster of projects that included work with the Kennedy Center in Washington, DC, and with the renowned Cleveland Orchestra, Cleveland, Ohio, and working with celebrated architects like Pei, Cobb Freed, Hugh Hardy, David Schwarz, and many others.

In 2000, the time came to move on from Jaffe Acoustics. Initially I worked closely with Peter Barnett and his firm AMS Acoustics in London, United Kingdom. A year later, I was back in the United States where I partnered with Russ Todd and Chris Blair (and later Anthony Nittoli) to found a new acoustical consulting firm that we called Akustiks (see akustiks.com), a play on the phonetic spelling of acoustics. In the over 40 years since I first walked

into Christopher Jaffe's office, I have had the honor and pleasure of working with wonderful performers and artistic directors, collaborating with extraordinary architects, and completing numerous rewarding projects. What I discovered was that working in acoustics was an ideal way to marry a love of music and a love of architecture and work in both fields together. But none of it would have happened without my parents, Chauncey and Frances Scarbrough, exposing me to music from an early age, giving me first-rate educational opportunities, and encouraging my interest in architecture along with a happenstance encounter with a book that would lead me to RPI and my learning from and working with Christopher Jaffe. If that's not serendipity, then I don't know what is.

#### References

McCullough, D. (1971). The Great Bridge, The Epic Story of the Building of the Brooklyn Bridge. Simon & Schuster, New York, NY.

> David Geffen Hall and the Evolution of Acoustics at Lincoln Center

#### **Contact Information**

#### Paul H. Scarbrough

pscarbrough@akustiks.com

Akustiks, LLC 101 Merritt 7 Suite 300

Norwalk, Connecticut 06851, USA

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