# 1 The Definition of an Architect

He looked at the granite. To be cut, he thought, and made into walls. He looked at a tree. To be split and made into rafters. He looked at a streak of rust on the stone and thought of iron ore under the ground. To be melted and to emerge as girders against the sky. These rocks, he thought, are here for me; waiting for the drill, the dynamite and my voice; waiting to be split, ripped, pounded, reborn, waiting for the shape of my hands will give to them.

AYN RAND, The Fountainhead<sup>1</sup>

**AFTER READING THE PRECEDING TEXT** from *The Fountainhead* by Ayn Rand, what are your thoughts and feelings? Can you relate to the main character, Howard Roark, in this passage? Are you overcome with the possibilities of creating with the materials around you?

Do you want to be an architect? Do you wish to study architecture? If your answer is "Yes" to any of these questions, this book is for you.

What is the definition of an architect? *The American Heritage Dictionary*<sup>2</sup> defines *architect* as:

- 1. One who designs and supervises the construction of buildings or other structures. är-ki-tekt, n. [MF architecte, fr. L architectus, fr. Gk architekton master builder, fr. Archi-
- + tekton builder]

Of course, this definition simply scratches the surface. Becoming and being an architect are much more.

<sup>◆</sup> Newseum, Washington, DC. Architect: Polshek Partnership Architects LLP.
PHOTOGRAPHER: LEE W. WALDREP. Ph.D.

#### What Do Architects Do?

People need places in which to live, work, play, learn, worship, meet, govern, shop, eat private and public spaces, indoors and out; rooms, buildings, and complexes; neighborhoods and towns; suburbs and cities. Architects, professionals trained in the art and science of building design and licensed to protect public health, safety, and welfare, transform these needs into concepts and then develop the concepts into building images that can be constructed by others.

In designing buildings, architects communicate with and assist those who have needs clients, users, and the public as a whole—and those who will make the spaces that satisfy those needs-builders and contractors, plumbers and painters, carpenters, and air conditioning mechanics.

Whether the project is a room or a city, a new building or the renovation of an old one, architects provide the professional services—ideas and insights, design and technical knowledge, drawings and specifications, administration, coordination, and informed decision making—whereby an extraordinary range of functional, aesthetic, technological, economic, human, environmental, and safety factors are melded into a coherent and appropriate solution to the problems at hand.

This is what architects are, conceivers of buildings. What they do is to design, that is, supply concrete images for a new structure so that it can be put up. The primary task of the architect, then as now, is to communicate what proposed buildings should be and look like.... The architect's role is that of mediator between the client or patron, that is, the person who decides to build, and the work force with its overseers, which we might collectively refer to as the builder.

SPIRO KOSTOF<sup>3</sup>





Parthenon, Athens, Greece. PHOTOGRAPHER: R. LINDLEY VANN.

But how does an architect truly design? It begins with a client with the need for a building, a project. To design and build this project, an architect follows the architectural design process. This process begins with the schematic design phase, with the architect first gaining an understanding of the scope of the project to be built from the client. With the program determined, the architect develops preliminary concepts and ideas for the project and presents these to the client for approval or revision. In addition, the architect researches zoning or other restrictions. Next is the design development phase.

In design development, the initial concepts and ideas are further refined. The architect begins to determine the building materials of the project as well as detailing the mechanical, electrical, plumbing, and structural aspects of the project. The architect will formally present the project, at this stage of development, to the client for approval. Next is the construction document phase.

During construction document phase, the architect produces detailed drawings and specifications of the project to be used for construction. These construction documents include all pertinent information necessary for construction. Once completed, the construction documents (CDs) are sent to potential contractors for bidding. Next is the bid or negotiation phase.

In preparation for actual construction, the architect prepares the bid documents. The bid documents include a number of documents for potential contractors to use in preparing a bid (cost estimate) to construct the project. Once bids are received from contractors, the architect will assist the client in evaluating and selecting the winning proposal. In the end, a contract is awarded to the selected bidder, which allows construction to begin. Next is the construction phase.

During construction, the architect's responsibilities will vary depending on the agreement with the client, but most commonly the architect will assist the contractor to construct the project as specified in the construction documents. As questions or issues arise on the construction site, the architect is there to address them. Depending on the issue, the architect may be required to issue additional drawings.

Thus, an architect must be equipped with a number of talents and skills to take a project from its initial idea to final construction. In the profession, almost all projects are undertaken by an architectural firm consisting of teams of architects, related professionals, and consultants, although there may be some smaller projects, usually residential, that might be led by a sole architect.

#### Why Architecture?

Why do you desire to become an architect? Have you been building with Legos since you were two? Did a counselor suggest architecture to you because of a strong interest and skills in mathematics and art? Or are there other reasons? Aspiring architects cite a love of drawing, creating, and designing; a desire to make a difference in the community; an aptitude for mathematics and science; or a connection to a family member in the profession. Whatever your reason, are you suited to become an architect?

#### Is Architecture for You?

How do you know if the pursuit of architecture is right for you? Those within the profession suggest that if you are creative or artistic and good in mathematics and science, you may have what it takes to be a successful architect. However, Dana Cuff, author of *Architecture: The Story of Practice*, suggests it takes more:

There are two qualities that neither employers nor educators can instill and without which, it is assumed, one cannot become a "good" architect: dedication and talent.

Dana Cuff<sup>4</sup>

Because of the breadth of skills and talents necessary to be an architect, you may be able to find your niche within the profession regardless. It takes three attributes to be a successful architecture student—intelligence, creativity, and dedication—and you need any two of the three. Also, your education will develop your knowledge base and design talents.

Unfortunately, there is no magic test to determine if becoming an architect is for you. Perhaps the most effective way to determine if you should consider becoming an architect is to experience the profession firsthand. Ask lots of questions and recognize that many related career fields might also be appropriate for you.

For the architect must, on the one hand, be a person who is fascinated by how things work and how he can make them work, not in the sense of inventing or repairing machinery, but rather in the organization of time—space elements to produce the desired results; on the other hand, he must have an above average feeling for aesthetics and quite some ability at drawing, painting, and the visual arts in general.

EUGENE RASKIN5



#### What is architecture?

**>** The creation of space.

John W. Myefski, AIA, Principal, Myefski Cook Architects, Inc.

**>** Architecture is the physical and spiritual transformation of chaos into order, darkness into light, and space into place.

Nathan Kipnis, AIA, Principal, Nathan Kipnis Architects, Inc.

As a creative science, architecture is the marriage of art and science.

Lisa A. Swan, Residential Designer, Design Forward

Architecture is the design and manipulation of the built environment to create a sense of place. It is a confluence of science and art that addresses programmatic and aesthetic requirements within the constraints of budget, schedule, life safety, and social responsibility.

Robert D. Roubik, AIA, LEED AP, Project Architect, Antunovich Associates Architects and Planners To me, architecture is anything that can be designed—a chair, a light fixture, a website, a logo, a building, or a city.

William J. Carpenter, Ph.D., FAIA, Associate Professor, Southern Polytechnic State University; President, Lightroom

Architecture is an attempt to consciously control the built environment through the balanced application of art and science. Those of us who practice architecture orchestrate economics, politics, art, and technology exclusively to create objects that impact the physical world we inhabit.

W. Stephen Saunders, AIA, Principal, Eckenhoff Saunders Architects. Inc.

Architecture is the design and construction of forms to create space.

Margaret DeLeeuw, Marketing Director, Celli-Flynn Brennan Architects & Planners

#### What is architecture? (Continued)

Architecture is the result of all that is conceived, planned, and created by an architect. It involves taking leadership in the process of working with a client, societal, or business challenge, identifying and defining the specific problems and opportunities for that challenge, and then synthesizing them into the most basic components and developing solution alternatives. Architecture is the result of using this process under the direction of a technically knowledgeable professional.

Randall J. Tharp, RA, Senior Vice-President, A. Epstein and Sons International, Inc.

Architecture is the built environments that shape the daily lives of people.

Grace H. Kim, AIA, Principal, Schemata Workshop, Inc.

Architecture is a passion, a vocation, a calling. It has been described as a social art and an artful science. Architecture creates space and formalizes relationships in the built environment. Architecture enriches and affects lives; it is both personal and public. Architecture provides great opportunity yet requires extreme discipline, restraint, and skill. Creativity, problem solving, a deep understanding of the objectives and underlying issues, and sensitivity to the effected environments (physical, social, economic) are key traits. Architecture creates form and inspires the future.

Catherine McNeel Florreich, Associate AIA, Architectural Intern, Eley Guild Hardy Architects, PA

Architecture is the special place, the extraordinary space that enriches our lives.

Diane Blair Black, AIA, Vice-President, RTKL Associates, Inc.

**>** Architecture is the forming of space and program into an aesthetic system.

Douglas Garofalo, FAIA, Professor, University of Illinois at Chicago; President, Garofalo Architects

Architecture is a collaborative process, the result of which is a building, a series of buildings, or interventions in the landscape that enrich the environment.

Lynsey Jane Gemmell, AIA, Project Manager/Associate, Holabird & Root

Architecture is construction that embraces the aesthetic, symbolic, tectonic, and cultural characteristics that best describe a particular place, people, and epoch.

Robert M. Beckley, FAIA, Professor and Dean Emeritus, University of Michigan

Architecture is the shelter for human existence. The process of architecture is the blend of art and science.

Patricia Saldana Natke, AIA, Principal and President, Urban Works, Ltd.

Architecture is the art of designing buildings and spaces within a given set of parameters. Those parameters may include the programmatic needs of the project, the client's budget, building code regulations, and the inherent properties of the materials being used. Great architecture finds the best solution to a design problem by using both creativity and practicality. Part sculpture, part environmental psychology, part construction technology, architecture is the combination of many separate forces into a harmonic whole.

Carolyn G. Jones, AIA, Director, Callison

> Architecture is a blend of art and science for the creation of spaces and places that elevate the human spirit.

Kathryn H. Anthony, Ph.D., Professor, University of Illinois at Urbana-Champaign

Architecture is the synthesis of art and science utilized to develop a solution to a challenge in the built environment.

Elizabeth Kalin, Architectural Intern, Studio Gang Architects



New York City, View from Empire State Building. PHOTOGRAPHER: MICHAEL R. MARIANO, AIA.

Architecture is a method to solve issues relevant to a progressing contemporary culture.

Brad Zuger, Architectural Designer, Shanghai MADA, S.P.A.M.

More than a building, architecture is beauty and function in form.

Christopher J. Gribbs, Associate AIA; Senior Director, American Institute of Architects

Architecture is everything. It is the house in which one lives; it is the office in which one works. Architecture is the hospital in which one watches loved ones die or recover. It is the church in which people marry the people they love. Architecture is the movie theater where you had your first date. Architecture is the room you grew up in, on that quiet street in the country. It is the apartment building you lived in with your first college roommate. It is the playground where you first encountered the merry-go-round.

Architecture is in every memory you will ever have, because it is everything and everywhere. One might dare to ask, "What is *not* architecture?" At its purest, architecture is the form that follows the function.

Ahkilah Z. Johnson, Chief of Staff Investment Services, Cherokee Northeast. LLC Architecture is that form of building and placemaking that elevates and illuminates the meaning of being human.

Joseph Bilello, Ph.D., AIA, Professor and Former Dean, Ball State University

As the Greek origin of the word defines it, architecture is both art and science. It is the practice of bringing these two objectives together in a manner of achieving "form, function, and design."

Kathy Denise Dixon, AIA, NOMA, Associate Principal, Arel Architects, Inc.

Architecture is the thoughtful and expert integration of aesthetics, function, and usability in buildings and facilities.

Lois Thibault, RA, Coordinator of Research, U.S. Architectural and Transportation Barriers Compliance Board (Access Board)

Architecture is the art and science of planning and designing structures and environments to house the activities of humans.

H. Alan Brangman, AIA, University Architect, Georgetown University

#### What is architecture? (Continued)

> Grounded by a broad understanding, architecture is the conscious shaping of the mental and physical forces and relations within a specific environment to sustain and celebrate life. When entering an exemplary piece of architecture, our senses are heightened, we slow, pause, and upon reflection we are fundamentally changed.

#### Max Underwood, AIA, Professor, Arizona State University

Architecture is the structuring of the built environment for the people who use it to solve their problems and needs including but not limited to the need for organization, association, separation, and shelter in a way that is inspirational, pleasing to the eye, generally is responsibly built (on budget and schedule), is sensitive to the environment in which it is found, (community and nature), is built to withstand the test of time, and improves their quality of life.

Ambassador Richard N. Swett (r), FAIA, President, Swett Associates, Inc.

> Architecture is the design of the built environment through the programming of needs, threedimensional design, and the application of appropriate building technologies.

Eric Taylor, Associate AIA, Photographer, Taylor Design & Photography, Inc.

Architecture is the art of building. Simply put, architecture is those buildings or places that inspire us. Architecture is also about the act of place-making, or making one feel comfortable. Architecture is not a slave to fads or trends. It is timeless and ages gracefully. God created a beautiful earth. Man has been charged with the stewardship of the earth. Good architecture enhances God's creation.

Edward J. Shannon, AIA, Director of Design, Benvenuti & Stein Design, Inc.

**>** Architecture is the immediate interface between people's lives and the societal frameworks in which



Interior, Johnson Wax Building, Racine, Wisconsin. Architect: Frank Lloyd Wright. PHOTOGRAPHER: R. LINDLEY VANN.

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they operate. It can facilitate opportunity, be used as a tool of oppression or reside in an arbitrary and benign middle ground.

Wayne A. Mortensen, Associate AIA, NASW, Project Manager/Urban Designer, H3 Studio; Lecturer, Washington University

Architecture is the creation of habitable space where social interactions and individual functions can take place.

Michelle Hunter, Lead Designer, Mark Gould Architect

Architecture makes a difference in the lives of people.

Lynn N. Simon, AIA, LEED AP, President, Simon & Associates, Inc.

Architecture is about the creative process of making and involves the many disciplines of craft and design. It touches all of us, informing and shaping the experiences of our lives in rich and meaningful ways. We cannot underestimate the human experience as part of the designed world we live in.

#### Barbara Crisp, Principal, bcrisp llc

Architecture is the creation and communication of ideas. It is the creative and technical process for the design, management and construction of the built environment. It represents a collaboration and coordination with a broad range of experts to get a building built.

#### Robert D. Fox, AIA, IIDA, Principal, FOX Architects

Architecture is the combination of art and science to design spaces, whether enclosed or open to the elements, for the protection, use, and enjoyment of others.

#### F. Michael Ayles, AIA, Principal, Business Development, Antinozzi Associates

Architecture is many different things to people. To the vast majority of the population, architecture is that which allows their lives to take place in comfort and is, for the most part, unknowingly experienced. To those who are educated in architecture,

it's an eclectic field that brings together aesthetics, engineering, and culture.

Allison Wilson, Bachelor of Science Graduate, University of Maryland

Deyond buildings, architecture is about the relationships between materials and among things more than it is about the things themselves. As such, architecture is primarily about prepositions: above, below, between, within, among, through, under, etc. This is partly why Renaissance painters made such good architects, but it is also what I think the contemporary painter/architect Sam Mockbee was talking about when he said, "Architecture has to be about more than just architecture." Being based on relationships, architecture is also fundamentally about human interaction.

Casius Pealer, J.D., Assistant General Counsel (Real Estate), District of Columbia Housing Authority; Cofounder, ARCHVoices

> Space, whether physical or virtual, that can support a thought.

Amy Yurko, AIA, Founder/Director, BrainSpaces

> From my perspective, the process of creating architecture is puzzle solving on a majestic scale. This translates into the critical thinking and problemsolving aspects of the profession that architecture programs are so good at teaching and that our clients rely on us for as we help them accomplish their goals.

The architecture project/puzzle contains an infinite number of variables. Some are static; some are dynamic. The attributes of some are known and universally understood; for others, the attributes are unique to the person investigating them or experiencing them. The puzzle is constantly evolving, and no one has control over it! Most interesting of all, the result of the architecture project/puzzle is never complete, and no one ever sees it the same as someone else or even experiences it themselves in the same way.

Kathryn T. Prigmore, FAIA, Senior Project Manager, HDR Architecture, Inc.

#### What is architecture? (Continued)

Architecture is the fully imagined design and the realization that comes to be.

Jennifer Jaramillo, Architectural Intern, Dekker/Perich/ Sabatini, LLC

Architecture is the process of creating useful, efficient, and attractive structures.

David R. Groff, Master of Architecture Candidate, Virginia Tech

Architecture is the shaping of environments, real or imagined, that affect the way people think, feel, act, or respond to their surroundings. In this context, architecture can be both a noun and a verb; in other words, it can be the painting itself, or the act of painting.

Architecture appeals to the senses. It can comfort us or intimidate us. It can make us feel welcome and home, or alone and cold. Architecture can be as much about the intended desires of the designer's imagination or the unintended consequences delivered when architecture is not considered more fully in its proper context. Real or imagined, the environment we live, work, and play in is directly influenced by the architecture that surrounds us. In essence, architecture is humanity.

Shannon Kraus, AIA, MBA, Vice-President, HKS Architects

Practical and artistic development of our environment. Winston Churchill once said, to paraphrase, what we build in stone we remember, so at some level architecture is about the creation of the making of memories and developing a sense of place.

Mary Katherine Lanzillotta, FAIA, Partner, Hartman-Cox Architects

The development of architecture is as much a design process as it is a simulation of inhabitable space(s) and building vocabularies. I will go as far to say that architecture is not architecture unless it was developed by means of an analytical process.

Thomas Fowler, IV, AIA, Professor and Director, Collaborative Integrative-Interdisciplinary Digital-Design Studio (CIDS), California Polytechnic State University—San Luis Obispo

Architecture is both a process and a physical construct. As a process it is the translation of the intangible (the vision or dreams of the client, the building program, etc.) into the tangible (functional space). As a physical construct it can manifest as the molding of space to meet the practical needs of shelter. However, architecture is more than this definition suggests. As John Ruskin once proposed, "the study of architecture is the study of all things; architecture is everything."

Margaret R. Tarampi, Associate AIA, Doctor of Philosophy Candidate, University of Utah





#### Past Is Prologue

### MARY KATHERINE LANZILLOTTA, FAIA Partner, Hartman-Cox Architects Washington, DC

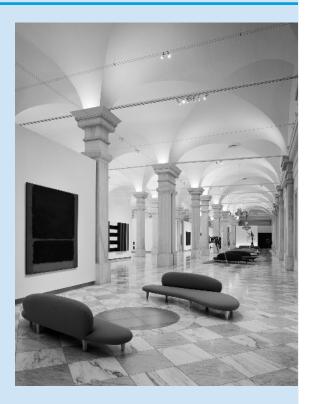
#### Why and how did you become an architect?

Having an idea develop into drawings and then a building where one lives or works is thrilling. My parents added onto our home and then built a new home when I was a child. The reality of this experience and living through the construction was very exciting. I knew by the time I was a teenager I wanted to find some way to be involved in the building process.

## Why and how did you decide on which school to attend for your architecture degree? What degree(s) do you possess?

As I was trying to decide whether to pursue engineering or architecture, the University of Virginia (UVA) offered a summer program for high school students on the "grounds" in Charlottesville. My parents agreed to let me attend the program to determine if architecture was a good fit for me. As part of the program, I attended morning lectures on history, visited job sites and then had a "studio" program in the afternoon. The experience was very positive, and I knew I wanted to pursue the bachelor of science in architecture at UVA.

After four years and a dozen or so architectural history courses at UVA, I knew I wanted to be more involved with the preserving the built environment. For graduate school, I only applied to programs that offered a combination of architecture and preservation; I completed a Master of Architecture



Lincoln Gallery, Smithsonian Donald W. Reynolds Center for American Art and Portraiture. Smithsonian Institution, Washington, DC. Architect: Hartman-Cox Architects. PHOTOGRAPHER: BRYAN BECKER.

at the University of Pennsylvania and a Certificate in Historic Preservation.

## What has been your greatest challenge as an architect?

Reminding myself to stay focused on the big picture and not to get bogged down in the details. To do this often requires me to step back and think creatively about how to solve the challenge in a different way.

## As a partner at Hartman-Cox Architects, what are your primary responsibilities and duties?

• One primary responsibility is to pursue, secure, and execute good work. As one who is interested in preservation, I tend to look for more work in this same area but am also open to exploring new opportunities. My other duties are "as assigned" as we do not have rigidly set roles but look to see what is needed and where.

## A handful of Hartman-Cox Architects projects relate to historic preservation, adaptive reuse, and rehabilitation. How and why are these issues important to architecture?

Most of the Hartman-Cox projects relate to providing a continuity of the sense of place. This can be achieved by preserving existing buildings, adding onto existing buildings in a sensitive and appropriate manner, or by building a new building which respects its neighbors and reinterprets the sense of place. Our firm believes in building timeless buildings of their place. The continuity of history is important culturally as there are specific reasons why particular materials are used in some locations and not in others and, in the process, they leave us with a lesson about the use of local materials and technology. In the case of the Old Patent Office building, now the Smithsonian Donald W. Reynolds Center for American Art and Portraiture,

▼ Smithsonian Donald W. Reynolds Center for American Art and Portraiture. Smithsonian Institution, Washington, DC. Architect: Hartman-Cox Architects. PHOTOGRAPHER: BRYAN BECKER.





Luce Foundation Center for American Art. Smithsonian Donald W. Reynolds Center for American Art and Portraiture. Smithsonian Institution, Washington, DC. Architect: Hartman-Cox Architects. PHOTOGRAPHER: BRYAN BECKER.

we can see the evolution of much of the nineteenth century technology and architectural history from the restraint and classicism of Robert Mills with the solid masonry vaults to the exuberance and mannerism of Adolph Cluss as seen in the Luce Foundation Center. Buildings also share the cultural memories of place from the soldier's carving his initials in the shutter of a window to the inaugural ball of President Lincoln.

Buildings also embody an enormous amount of energy, and to reuse or renovate buildings appropriately to keep them in use is a responsible approach. In 1958, the General Services
Administration considered tearing down the Old
Patent Office Building that occupies two city blocks
and turning the site into a parking lot. The amount
of wasted materials would have been vast and the
history would have been lost.

### What is the most/least satisfying part of your career as an architect?

The most satisfying experiences are watching people in the buildings and see how they are enjoying the building and see if they are experiencing it in the manner we expected. Of course, if when you find the public is not as pleased with some aspect, these are the most instructive moments. All architects should visit their own buildings to see what works and what does not so they can improve upon their experience.

## Can you provide details on Architecture in the Schools and why it is important for you to serve the profession in this way?

A program of the Washington Architectural Foundation, Architecture in the Schools (AIS) teams volunteer architects with pre-K to twelfth grade classroom teachers to use architecture and design concepts to reinforce learning standards across the curriculum. Established in 1992, the Architecture in the Schools program originated in the District of Columbia and expanded to the greater Washington metropolitan area in 2002.

Students in the program (1) learn problem-solving techniques, (2) explore different ways to express their ideas, (3) examine their environment through the classroom projects they design, (4) apply abstract concepts to real-life scenarios, (5) develop a cross-curricular understanding of subject matter, and (6) cultivate civic awareness of how the children can influence their environment.



Load Testing Columns, Oyster Elementary School Third Grade, Washington, DC. Washington Architectural Foundation, Architecture in the Schools. COURTESY OF THE WASHINGTON ARCHITECTURAL FOUNDATION.

Since its inception over 320 schools and over 8,400 students have participated in the program. The Architecture in the Schools program has expanded to include professional development programs for teachers to learn more about how to integrate design and architecture into their curriculums and a series of architectural walking tours for children in Washington, DC neighborhoods.

The experience of opening the eyes of children to the world around them and having them think critically about choices in their neighborhoods has had a profound impact on me. The opportunity to share my understanding of design and architecture with these students has forced me to learn to speak about architecture in a readily understandable way. The students' questions helped me to think critically about how to present ideas in a new approachable manner. Further, these students will grow up and become homeowners or members of a citizen's advisory committee. When this next generation has to think critically

about a design issue that may impact or influence their communities, I hope they will have some frame of reference on which to base their decisions.

## Who or what experience(s) has been a major influence on your career?

without setting out to do so, I have found myself gravitating toward projects that have an educational theme. The preservation projects are educational in what and how the buildings are preserved and the missions of the organizations themselves whether it is preserving the Lincoln or Jefferson Memorials or renovating the UNC Morehead Planetarium Building. The Architecture in the Schools program is more directly educational, but the program attempts to encourage children to look at their world and think critically about it while they are still open minded.

My current partners, Warren J. Cox, Lee Becker, and Graham Davidson, and emeritus partner,

George Hartman and all of the members of the Hartman-Cox team over the years particularly those who took the time to help me understand what was required and patiently answered all of my questions.

My parents encouraged me to explore architecture both as a young child by building and, then, as a student when I wanted to pursue architecture as a career. My parents also were role models for getting involved in and giving back to the community through their own service. The hundreds of Architecture in the Schools volunteers who have given so freely of their time to share their knowledge of architecture and the built environment with the schoolchildren in DC and the metropolitan area to bring AIS program to life in the schools.

Rolaine Copeland, Hon. AIA, was the Architecture in Education program director at the Foundation for Architecture in Philadelphia and who encouraged me to start the Architecture in the Schools program in DC.

#### Daring to Lead

SHANNON KRAUS, AIA, MBA Vice-President HKS Architects Dallas, Texas

#### Why and how did you become an architect?

I became an architect simply because it was a lifelong goal. A life's goal achieved. A passion delivered. It was something I set my mind on from the time I was in fourth grade when the only class I had true interest in was art; my mother had the vision to open my mind to architecture as an occupation that would fit my interests.

It was through art and imagination that I could express myself. I did this through the pictures I would draw, the models I would build, and the forts I would enlist the neighborhood kids to help construct. From there, becoming an architect simply felt right.

However, in the end I did become an architect to make a difference. While I pursued architecture because that is where I could express myself, I have found that what I enjoy most about this amazing profession is having the ability to work with diverse groups of people to solve complex problems so that others can fulfill their dreams—thus really making a difference by turning vision to reality.

From my first day on campus at Southern Illinois University (SIU) to gaining registration as an architect in the state of Texas, my journey took approximately 12 years—four years of undergraduate work, one year as American Institute of Architecture Students (AIAS) vice president, three years in graduate school for the Master of Business Administration (M.B.A.) and Master of Architecture, and four years of internship at RTKL finished concurrently with the nine exams spread over 18 months.



Ahuja Medical Center, Beachwood, Ohio. Architects: HKS Architects and Array Healthcare Facilities Solutions. PHOTOGRAPHER: SHANNON KRAUS, AIA, MBA.

## Why and how did you decide on which school to attend for your architecture degree? What degree(s) do you possess?

Coming out of McArthur High School in the central Illinois town of Decatur, with the ambition to pursue architecture, I found myself at a small, but terrific undergraduate program at Southern Illinois University at Carbondale. How I ended up there was primarily the result of not enough information, and economics. They had a four-year architecture program, and it was less expensive than most any other school in the area. What I did not know was that the reason it was less expensive was because their architecture program was not accredited. In the end, this turned to be a blessing—SIU was one of the best, if not luckiest, decisions I made.

Through SIU I learned the art of architecture. I learned to think, draw, paint, sketch, and resolve complex variables into rational solutions. While not known for design, the school was heavily based in the fundamentals, including learning how buildings go together—more so than most schools cover. My education at SIU provided me with the best foundation for becoming an architect I could have asked for.

For graduate school I ultimately chose the University of Illinois at Urbana-Champaign. Having just completed my term as national vice president of the American Institute of Architecture Students, a full-time job in DC following my undergraduate studies, I came to realize that the single biggest gap in the amazingly rich and diverse education that architecture provides is business.

As such, I chose to apply to universities where I could also attend business school—a decision that ultimately led into my acceptance into the school of architecture and the school of business at the University of Illinois, where I graduated summa cum laude with a Master in Business Administration, and a Master in Architecture. Where the M.B.A. equipped me to think more holistically about business, and refined my communications skills, the M.Arch. filled in the remaining gaps with a curriculum more focused on design and design theory.

Reflecting back on how I chose the schools I did, I do believe that the profession does not have an adequate guidance system for assisting students interested in architecture. I say this because in many ways the school you choose will ultimately go a long way towards determining the type of professional you become.

### What has been your greatest challenge as an architect?

As an architect, I would have to say my greatest challenge would be one of my current projects that is for Hadassah in Jerusalem, Israel. Not only has it been a challenging project in terms of healthcare planning, but it also has been a challenging design problem due to the numerous site variables (it is located at the top of a mountain in Ein Karem, overlooking the birth site of John the Baptist), the diverse culture, and the rich context. Our goal is to provide a modern, state-of-the-art facility that can respond to the needs of the region, while embracing the historical significance of the surrounding area. Like most projects, this will be a collaborative effort, where we can draw from the combined strengths of the design team and our consultants to deliver a project that exceeds the client's needs.

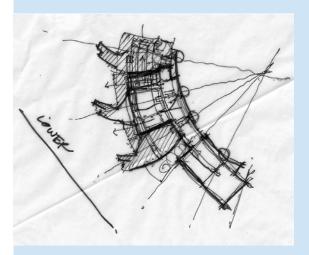


Hadassah Medical Center Bed Tower, Jerusalem, Israel. Architect: HKS Architects. ARTIST: MICHAEL LUNGREN.

#### Why did you pursue two graduate degrees— Master of Architecture and Master of Business Administration—during your graduate studies?

I believe in the notion that an architect is a generalist. The architectural education is extremely comprehensive and provides the foundation suitable for many careers; however, business seemed to be the one missing ingredient.

After serving as AIAS national vice president, I quickly came to realize that architecture is a business and that there was much more to learn—so I decided to go back to school and round out my education by earning an M.B.A. in addition to the Master of Architecture. After speaking with others, I also knew that if I were to ever pursue the M.B.A., the time to do it was then—as there were no guarantees that such an opportunity would be available later in life.



Ahuja Medical Center, Beachwood, Ohio. Architect: HKS Architects and Array Healthcare Facilities Solutions. RENDERING: SHANNON KRAUS, AIA, MBA.

Ultimately I felt the M.B.A. would help me simply by providing additional tools for me to draw upon. However, in addition to the business skills, the M.B.A. had many other benefits that I did not anticipate. The program I went through proved valuable in helping me to hone my communication skills, problem-solving ability, and leadership skills. In many ways, the business degree was not as much about accounting or finance as it was about maximizing resources and leadership.

## As one of the youngest vice presidents in the history of the AIA, what would you say was your most significant achievement?

During my tenure as AIA Vice President I had the fortune of being involved in several meaningful things that I feel truly help the profession. One of the most significant was working with my fellow executive committee members to help the AIA craft and adopt a policy supporting the 2030 Challenge. Other milestones include the development of a national ARE scholarship, as well as the creation of a National Research fund for evidence-based design. In each case, I was able to help facilitate the continued growth and development of the AIAS's transformation into a knowledge-based organization. My goal as vice president was simply to have made a difference—to have a positive impact on the evolution of the institute, no matter how small. In doing this, it's now my hope that others are as passionate about the profession as I am will be similarly encouraged to get engaged and get involved.

## As a relatively young architect in a large firm, what are your primary responsibilities and duties?

Currently I am a studio leader for a 35-person healthcare studio. My official role is director of



Flower Mound Hospital, Flower Mound, Texas. Architect: HKS, Inc. RENDERING: SHANNON KRAUS, AIA, MBA.

design. This would include serving as the senior design lead on multiple projects, cultivating new work, working with clients to deliver on their expectations, and working with the team to adequately staff projects, develop talent, and nurture new leaders.

Some of my recent projects include Ahuja Medical Center in Cleveland, Ohio; Flower Mound Hospital in Flower Mound, Texas; and Enze Medical Center in China. In all of these projects, regardless of my role, my goal is to understand the clients' needs, listen to their dreams, and work with them to identify innovative design solutions that they can implement on time and on budget.

### What is the most satisfying part of your career as an architect?

> Seeing projects you pour your heart and soul into get built. When you are pursuing something you love and look forward to, there isn't a greater

feeling in the world than to see not only your vision realized but that of your team and client. I work for one of the best firms in the world, and it is great knowing that through a team effort, where you draw from each other's strengths and weaknesses, that truly great architecture can be realized.

## What is the most important quality or skill of a healthcare designer?

Patience, communication, and knowledge are the most important skill sets of a designer in healthcare, or any area for that matter. As a programmer and designer in healthcare, we work directly with clients, physicians, nurses, equipment specialist, contractors, builders, project managers, and business leaders. In each case, the architect must be knowledgeable enough of the subject matter being programmed to effectively communicate in the language of the particular user being met with. Most issues and challenges are the result of poor communication, so hav-

ing the patience to work through misconceptions and differences of opinions is key to resolving issues as you develop a program or a project design solution. The knowledge of healthcare facilities comes through trial and error, is learned more on the job than in school. You have to be "heads-up" in the office, seek out every opportunity to participate in a meeting or go on a tour.

#### Who has been a major influence on your career?

There have been many great influences on my career, but none greater than my parents and my wife. While I have benefited from many great mentors, and try to learn from all of those around me, it is my parents who helped shape me into the man I am today, teaching me to believe that I could do anything I put my mind to. And it is my wife who helps keep me focused, motivated, and on track with an even-keeled perspective that brings with it humility and grace. Without a doubt I am blessed to have them as positive influences in my life and I know that I would not be where I am today if not for them.

## What has been your most rewarding endeavor as a professional?

Without hesitation it would be the planning, design, and construction of a clubhouse for a Make-A-Wish child named Giovanna. At the age of 13, Giovanna, who was challenged with a potential life-threatening illness, was given the opportunity by the Make-A-Wish Foundation of North Texas to have one of her wishes come true. While she could wish for just about anything, her wish was to have a clubhouse—a place that she could have as her own, and a place she could have friends over for a slumber party.

The result was a 400-square-foot clubhouse with a loft, fire pole, and screen porch, inspired by Giovanna's own vision. Interns designed the project with Giovanna as the client. She was given schematic designs, models, and material boards. Without a doubt it was a very rewarding experience. Knowing that we were able to utilize our design skills to make her vision—her wish—a reality, was very rewarding.

#### Architecture as a New Media

WILLIAM J. CARPENTER, Ph.D., FAIA

**Associate Professor** 

School of Architecture, Civil Engineering Technology and Construction

Southern Polytechnic State University

Marietta, Georgia

President, Lightroom

Decatur, Georgia

#### Why and how did you become an architect?

I grew up in New York. I became an architect because of my sixth grade teacher, Robert Fisher.

I was his first student to go to architecture school and I could not have done it without him. He invented classes for me, such as eco-tecture, that emphasized sustainable design before it was in vogue. He collected donations from many of the businesses in our town to create a scholarship for me that he gave me at high school graduation. This summer I went to visit him and he had all of the drawings and books I had sent him displayed in his library. I would not have known what architecture was without him.

I was able then to apprentice for two great architects: first, Norman Jaffe, FAIA, in New York and then Samuel Mockbee, FAIA, in Mississippi. Mockbee later received the America Institute of Architects (AIA) Gold Medal.



The Breen Residence, Atlanta, Georgia. Architect: William J. Carpenter, FAIA, Ph.D. PHOTOGRAPHER: KEVIN BRYD.

## Why and how did you decide on which schools to attend for your architecture degree? What degree(s) do you possess?

Described by Bachelor of architecture, master of architecture, and Ph.D. in architecture. I went to Mississippi State for my undergraduate studies because I asked Richard Meier at a career day what school he would attend and he said he had just returned from there and something interesting was happening there. At 17, I packed my bags and arrived from New York. He was so right—I was able to study with Robert Ford, Christopher Risher, and Merrill Elam.

I chose Virginia Tech for graduate studies because of its emphasis on urbanism and tectonics. No school in the world offers a better balance of these pedagogical intents—of course, I *am* an alumnus. Jaan Holt and Gregory Hunt were amazing professors and left an indelible imprint on me.

For my doctorate I wanted to go to England. There I was able to study with Professor Thomas Muir before he retired. I studied at the University of Central England at Birmingham Polytechnic which is one of the oldest programs in the United Kingdom. Muir, Alan Green, and Denys Hinton gave me an appreciation for Europe, how to live and where to find the best pubs. I have never met anyone with a deeper commitment to architectural education and learning.

### What has been your greatest challenge as an architect?

The greatest challenge I have is balancing my time. I have two wonderful daughters and desire to be an integral part of their lives. I have amazing students to teach, and I work for great clients on architectural commissions. I have been blessed. The biggest challenge is getting all it done well. One of the ways I keep it all together is to keep a journal/sketchbook, in which I try to keep new ideas or work on existing ideas at many different scales.

## How does your work as a faculty member inform your architectural practice and vice versa?

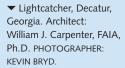
My students constantly inspire me and help me see things in new ways. I always invite them to my studio and to see new projects. I try to be involved in their lives during and after school. They are why I teach and I owe them a lot. I also try to involve students in actual projects such as our community outreach in Reynoldstown (in downtown Atlanta).

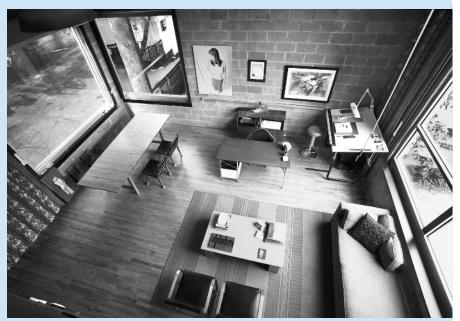
## What are your primary responsibilities and duties as an architect and a faculty member?

I am president of Lightroom, an architecture and new media firm in Decatur, Georgia. In the past few years we have won awards in a number of different disciplines, including being on the team who won the international 48-hour film festival, being on the team that had a short film accepted to Cannes, and two major awards of excellence from the AIA and from *Print Magazine*. I do not think awards define you, but I appreciate that they are from very diverse organizations, all for excellent design.

I am also director of the evening professional program in Architecture, where I teach the thesis studio, which is very enjoyable. I like teaching at the fifth-year level. I am currently working on a very exciting documentary film with my students on the history of the Virgin Mary's home in Ephesus, Turkey.









You authored the book Modern
Sustainable Residential Design: A
Guide for Design Professionals (Wiley, 2009). What is sustainable design
and why is it important for design
professionals?

Sustainable architecture is designing efficient buildings that can produce their own energy and allow for the least damage to the earth possible—such as using recycled buildings or materials. It is important for design professionals because economy (part of the Vitruvian triad) is an essential element of great design.

About two years ago the editor of *Dwell* magazine contacted me to write their first book. I have always been impressed

with how they humanized modernism with pictures of people and looking comfortable in their homes. Sustainability is often seen as a fad amongst architects and the public. I believe it is an integral part of architecture and the best modern buildings I know—such as the Second Jacobs house by Frank Lloyd Wright and his Rosenbaum House—are great examples of sustainable modern buildings. I am concerned today about sus-

tainable buildings that look modern-"ish" and not "modernist." This is the difference between style and commitment and authenticity. In the future I believe that sustainable architecture will produce power for us—whether it is a house or an entire city. An important sustainable principle that students need to remember is that the adaptive reuse of buildings can be one of the most sensitive moves an architect can make.

#### Enhancing Business Through Design

#### ROBERT D. FOX, AIA, IIDA

Principal, FOX Architects
McLean, Virginia/Washington, DC

#### Why and how did you become an architect?

My father was an architect, and I grew up in the offices of Louis Kahn and Romaldo Giurgola when I was a kid. When I was faced with having to get serious about what I wanted to do, architecture was where I felt most comfortable.

#### Why and how did you decide on attending Temple University for your architecture degree? What degree(s) do you possess?

I have a bachelor of architecture from Temple University. Because my father taught there so I received the family discount making the decision easy.

### What has been your greatest challenge as an architect?

Design is something of incredible beauty and value; the spaces we create add significantly to the health, beauty, and economics of place, but architects are the last ones to realize that and, in fact, architects tend to devalue the real value of design.

One of the greatest challenges is keeping up with the rapidly changing information about the profession. I could not imagine being a single practitioner; you would just be falling further and further behind.

## Earlier in your career, you specialized in corporate interiors. How does interior architecture differ from architecture?

Interior architecture is much closer to the individuals who use the space, and I get to see much more closely the impact of the design. I also enjoy learning about other businesses and people.



U.S. Pharmacopoeia Master Development Plan, Rockville, Maryland. Architect: FOX Architects.

#### As a principal of a firm, what are your primary responsibilities and duties?

There are the basics of the financials, marketing, human resources, legal, insurance, real estate, IT, software, contracts, etc., that I did not learn in school.

More importantly, I enable design. I am responsible for listening, and then I am responsible for developing and communicating the direction of the firm in a clear and concise manner, and building consensus. I need to find the strengths in others and enable them to perform at very high levels, to offer my experience and expertise. Then I need to stay out of the way to let it all happen.



U.S. Pharmacopoeia Master Development Plan, Rockville, Maryland. Architect: FOX Architects.



U.S. Pharmacopoeia Master Development Plan, Rockville, Maryland. Architect: FOX Architects.

## FOX Architects specializes in architecture, interior design, graphic design, multimedia design, and signage. How do these different design disciplines interact within your work?

The reason that we have a multidisciplinary design practice is to expand and engage the dialogue of our work. We cannot get breakthrough ideas if we are talking only to ourselves; we need different ideas and perspectives to stay fresh and develop really new ideas.

### What is the most/least satisfying part of your career as an architect?

The most satisfying part is seeing others get it and realize their potential—that is really exciting. I also enjoy learning about other businesses and seeing different business models. Feeling like I am one of a very few that realize the value of design and trying to get what we deserve is the least satisfying. We carry so much liability for what we do, few professionals really understand the risks that they take on—they just want to design, and while that may be fun, you cannot achieve the kind of goals to do better and better work, more research, seek better projects unless you are making a decent profit. Architects limit themselves.

## Who or what experience has been a major influence on your career?

First, my dad has been a big influence. In addition, I have been influenced by a number of the developers with whom we work and seeing what it really takes to put a building together—the debt and financing, operation, management, sales, and leasing.

#### A Teacher's View

#### THOMAS FOWLER, IV, AIA

**Professor and Director** 

Collaborative Integrative-Interdisciplinary Digital-Design Studio (CIDS)

California Polytechnic State University-San Luis Obispo

San Luis Obispo, California

#### Why and how did you become an architect?

> My primary motivation for pursuing architecture began with an interest at a very young age and a desire to understand how everything worked by taking things apart and sometimes getting them back together (not always). I did not know of another profession at the time that would give me a global sense of how things worked and how to document discoveries of what I found through drawings. I had very naïve but romantic notions of what architects supposedly did—but this was just the vehicle that propelled me into going to school to learn about more about architecture.

## Why and how did you decide on which school to attend for your architecture degree? What degree(s) do you possess?

I possess a bachelor of architecture from New York Institute of Technology/Old Westbury and a master of architecture from Cornell University. My decision for selecting my undergraduate institution was based on what I could afford to pay, the location, and which schools would admit me. Selecting the graduate program was because of an opportu-



Lumeire Ghosting Portable Theater Project, CIDS Project at California Polytechnic State University–San Luis Obispo, CA. Faculty: Thomas Fowler, IV, AIA.

nity to work as an administrator and do graduate work at the same time. The reason for pursuing graduate work was to obtain additional design theory and to explore the possibilities of teaching.

## What is the greatest challenge facing the future of the profession?

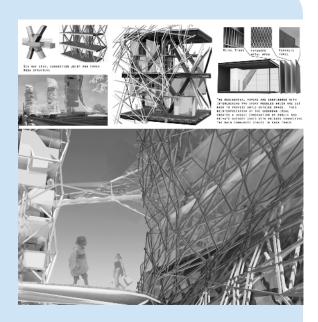
The greatest challenge is the lack of accessible and visible role models in the profession and in the academic environments for aspiring ethnic minority and women students interested in pursuing this field.

From my own experience, I was fortunate to have a cousin that practiced architecture in New York City who allowed me to work in his office from high school through my undergraduate studies. This was the component of my education that actually kept me in school, since my challenge was to see the relevancy of my schooling to the eventual practice of architecture. For all students, some linkage to role models is helpful when things do get tough to sort out while in school.

From my undergraduate education and beyond, I have always been very fortunate to find role models to keep me on track and to expose me to opportunities that I would not had known about otherwise. I think it is important to have a strong sense of your destination but have some flexibility as to what the path might be to achieve this goal. Ultimately, stay agile in your ability to modify your future goals as they relate to experiences acquired on your path of learning.

## How does your work as a faculty member inform your architectural practice and vice versa?

> Being constantly surrounded by the same age group of bright minds, always made up of a diverse



"Urban Filtration" Housing Project, Students: Architecture: Rachel Glabe and Megan West. Structural Engineering: Caitlin Potter and Leigh Guggemos. Faculty: Thomas Fowler, IV, AIA; James Doerfler, AIA; Mark Cabrinha; Kevin Dong, SE.

range of individuals, who are able to generate a collective range of other ways of seeing a problem is a valuable learning experience to the teacher. Teachers learn at an accelerated rate from their students. Students will always challenge the conventions on how things go to together.

As an academic whose practice of architecture is embedded in working with students in the design and construction of a range of building mockups and prototypical structures, this form of practice has been helpful in acquiring examples to show students regarding the intimate process of how design and the construction process works at a smaller scale. The academic involved in practice always has a voice in the back of his/her mind asking the ques-

tion "how can I capture this process in such a way as to explain it to students so they will be able to learn from it."

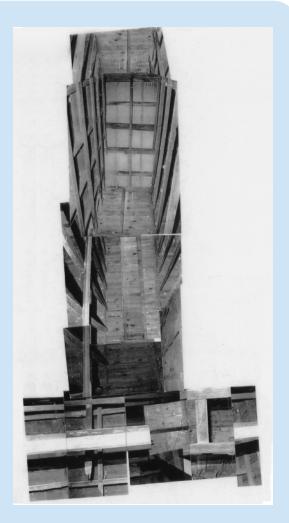
## What are your primary responsibilities and duties as an architect and as a faculty member?

as practicing architects first and as academicians second—since it seems to be a logical way to ensure that students will be learning the skills that they need to become architects. From my experience being a practitioner first does not ensure this linkage to practice, but this depends more on what teaching strategies that are developed to provide students with the tools for understanding these connections.

Practitioners need to understand that they play an important role in the education of architects too. There is also talk about needing students to deal with more of a complexity of design issues while in school, but I would argue issues have to be simplified so students can develop ideas beyond the planning stages of a project into constructible architectural vocabularies. Acceptable levels of design development are lacking in many studios since too much time is spent on thinking about the complexities.

## How does teaching differ from practicing architecture?

What a teacher does is very much a mystery to those who do not teach, which I think is more of a problem for universities to solve regarding how to decode the process for what academics do as opposed to non-academics. I often hear that the role of an architecture professor is to teach students the skills to build buildings. I would argue the role of an architecture professor is far greater than just this. Teaching is more of a modeling of future citi-



Tobacco Barn Collage, Horry County, South Carolina. Architect: Thomas Fowler, IV, AIA.

zens who will make great contributions to society as upstanding citizens in addition to also having the knowledge to create architecture. Good teaching is where both the student and teacher learn from the interaction. This is why most are attracted to teaching—since this role provides a continuous mechanism to learn.

#### During your career, you have been a member of more than one of the national boards of the collateral organizations. What has that involvement meant for your career?

It is often the perception that individuals who become involved as volunteers with associations have limited interest in the broader issues that affect the profession (i.e., design, etc.). I actually have the opposite view that active involvement with the collaterals has given me a broader view and appreciation for the profession. Navigating association work is the ultimate design prob-

lem for consensus as you move through a bureaucracy. I served as national president of the AIAS (1984–1985), and served as Association of Collegiate Schools of Architecture (ACSA) faculty advisor (2001–2003), served as secretary for the ACSA (2004–2006), and board member for National Architectural Accrediting Board (NAAB) (2006–2008) and secretary (2007–2008). Involvement in association work allows you to establish a macro view of the profession through a variety of networks that over time disperse and expand as people move on to different things.

#### A Gentle Woman's Profession

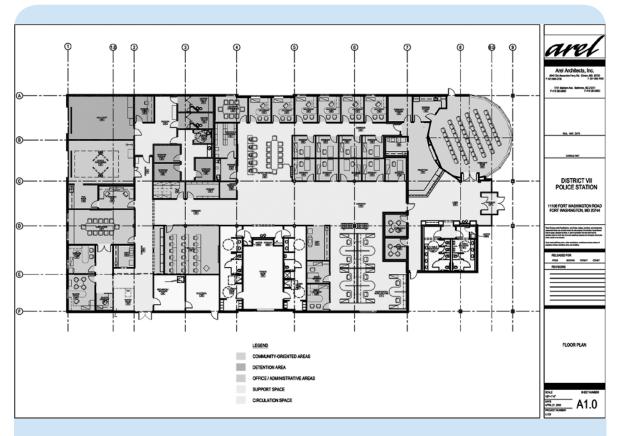
### KATHY DENISE DIXON, AIA, NOMA Associate Principal Arel Architects, Inc. Clinton, Maryland

#### Why and how did you become an architect?

My becoming an architect is the result of several influences during my childhood, not the least of which is the fact that my father was an architect for the Army Corps of Engineers. In a sense, I think I inherited the desire to be an architect. But moreover, the fact that I had a creative nature, drawing ability, and good math skills also led me to pursue architecture.

Randle Highlands Elementary School, District of Columbia Public Schools, Washington, DC. Architect: Jacobs Engineering. PHOTOGRAPHER: KATHY DENISE DIXON, AIA, NOMA.





District VII Police Station, Prince George's County, Fort Washington, Maryland. Architect: Arel Architects, Inc. DRAWING: RONALD D. LIPFORD, AIA, NOMA.

## Why and how did you decide on which school to attend for your architecture degree? What degree(s) do you possess?

It was a fairly easy choice to decide to pursue architecture at Howard University due to the fact that they were the only institution that offered me a five-year scholarship. After my bachelor of architecture, I also pursued a master of arts in urban planning at University of California at Los Angeles (UCLA) with a focus was housing and community development.

#### Why did you pursue the additional degree— Master of Arts Urban Planning from UCLA?

I felt that pursuing a degree in planning would enhance my perspective as an architect. Even the best architecture has to respond to context. On a broader scale, understanding context, community, environment, and our society is essential for a well-rounded architect. I believe all architects should learn more about urban planning, planning policy, and urban design so we are not designing in a vacuum.

## What has been your greatest challenge as an architect?

> Personally, my greatest challenge has probably been gathering up the personal confidence to do well in the profession. I was licensed at 29 years of age and had two professional degrees, plus I had obtained additional certifications. However, with all the education and achievements, I was not confident that I could make the decisions and lead the design process and team on my own. I remember having a talk about the lack of confidence with a colleague who had recently started his own consulting business. He told me that I just had to believe in myself and be confident that I can make the decisions and do what is required. He suggested that everyone has this challenge and he had to deal with the same issues in starting his business. It still took more years of experience before I felt I could lead a design team, but I have overcome that personal and internal self-challenge.

### What are your primary responsibilities and duties?

As associate principal, I work on a variety of tasks from traditional architecture to marketing the firm. I am currently responsible for a variety of municipal projects for the local county government. The firm has only recently begun working heavily with the local government and has resulted in a number of civic architecture projects including, fire stations, schools, police stations, and other building types.

With respect to marketing, I share the responsibility of seeking new work and responding to requests for proposals with the principal of the firm. This requires time to review bid lists, write qualifications statements, and partner with various firms to ob-

tain new projects. Attending pre-bid meetings and networking with engineers and other architects is an important aspect of putting together a project team.

### What is the most/least satisfying part of your career as an architect?

> Seeing the finished product of your labor is probably the most satisfying of any career one can choose. To visit, experience, and reflect over the completed structure and the decisions that went into its creation is a satisfaction that few others will experience.

Probably one of the least satisfying aspects of being an architect is the length of time it takes to see your work come to fruition. Other careers generally have immediate results. However, the length of time to design and construct a building can be 18 months or longer. It is challenging, especially as a young architect, to have to wait so long to see the realization of what you have been working on.

#### During your career, you have been involved with the National Organization of Minority Architects (NOMA). What is the NOMA and how has your involvement benefited your professional career?

The NOMA is a professional networking organization founded in 1971 to assist minority architects in their career development. Although the number of minority architects is increasing, there are currently only +/- 220 licensed African American women architects in the country. This presents challenges for individuals pursuing the field of architecture and requires a great deal of mentoring. Prior to deciding to pursue a career in architecture, I did not know a single African American woman architect. I only met a couple during my college studies. Although I became licensed on my own, it would have been very beneficial for me to have known and



Potomac Consolidated TRACON, Federal Aviation Administration, Warrenton, Virginia. Architect: Jacobs Engineering. PHOTOGRAPHERS: KATHY DENISE DIXON/YUYAN ZHOU.

potentially been mentored by a woman architect. As a result, I am involved with the NOMA and have a particular interest in mentoring young African American women in the field of architecture.

Professionally, through the NOMA, I have become acquainted with owners and principals of African American—owned firms around the country. This familiarity leads to partnering for potential projects and even opportunities for employment changes.

## Who or what experience has been a major influence on your career?

More of course, my father was a major influence in my decision to become an architect. I am very much like my father in character and interests. I was also fortunate to have Barry Washington, an interior designer, serve as a role model early on in my career. On my first job working as a CADD operator for the U.S. Department of Justice, I worked with Mr. Washington on various facility management projects. Barry required a high level of professionalism and quality of work during my three-year internship. His expectation for design excellence has remained with me throughout my career.

#### From Verbal Concept to Fabrication

DOUGLAS GAROFALO, FAIA
Professor, School of Architecture
University of Illinois at Chicago
Chicago, Illinois
President
Garofalo Architects, Inc.
Chicago, Illinois

#### Why and how did you become an architect?

Initially, I wanted to become an architect because it seemed to combine my interests in making, building, and the arts; I became an architect by attending a five-year bachelor of architecture degree program, working a few years in an office, studying for and passing the Architect Registration Exam (ARE), and then attending graduate school. I consider all four of these steps equally important.

## Why and how did you decide on which school to attend for your architecture degree? What degree(s) do you possess?

> I decided on Notre Dame for undergraduate school because it had one year entirely in Rome, Italy. I went to Yale for graduate school based on the strength of both the art and architecture schools.

### What has been your greatest challenge as an architect?

Perhaps it is the necessity of protecting design concepts throughout the life of a project. That this integrity is maintained is not a given—quite the opposite in many cases. Also the general resistance to contemporary projects in the United States; we have much success, but it is usually not easy.



Nothstine Residence, Green Bay, Wisconsin. Architect: Garofalo Architects. PHOTOGRAPHER: GAROFALO ARCHITECTS.



Hyde Park Art Center, Chicago. Architect: Garofalo Architects.

#### How do you balance the challenging demands of both an architectural practice and teaching within a program in architecture?

I would not refer to this situation as a balance, but a competition for time; it is something that continues to evolve as the work in the office changes. The one does feed the other though, and I feel that sometimes I get as much from the students as they from me.

#### You were involved with the award-winning Korean Presbyterian Church of New York, the first building truly conceived and executed with digital media. Please provide more insight on the experience of designing by digital media.

We were able to exploit these relatively new digital tools from email file transfer to complex manipulations of form and program over the Internet to form a truly unique collaboration. Also, and perhaps more relevant to our current work, the use of multiple software programs (as opposed to one or two), enhances our interests in the software program over time, complex geometries, patterned space and surface, repetitive structure, and many other concepts. Increasingly, digital technology allows us to be more involved in fabrication and building as well.

### What are your primary responsibilities and duties as an architect?

My office is organized to run as a studio in the truest sense of the word, or at least my definition of it; everyone does everything insofar as it is possible, meaning everyone acts as a designer and everyone runs projects. This makes me a sort of director, overseeing and collaborating.

#### What is the most satisfying part of your job?

It may sound simple, but the seemingly simple verbal banter and exchanges in the office result in some very interesting concepts. We then develop these in a sophisticated way. The act of making, from verbal concept all the way through to fabrication is most satisfying. And of course, seeing the structure built and inhabited.

#### What is the least satisfying part of your job?

The amount of so-called justification to complete a building is astounding; most of it is necessary and good, but some of it is absurd. A good example of this is how hard it is to obtain a building permit.





▲ Spring Prairie Residence, Spring Prairie, Wisconsin. Architect: Garofalo Architects. PHOTOGRAPHER: NATHAN KIRKMAN.

◀ IN.FORMant.system – Museum of Contemporary Art, Chicago. Architect: Garofalo Architects. PHOTOGRAPHER: GAROFALO ARCHITECTS.

Another unique project during your career was the full-scale prototype newsstand at the Museum of Contemporary Art in Chicago. Please describe this project and its uniqueness.

The IN.FOrmant.system was a built response to a set of questions raised by the Museum of Contemporary Art in Chicago for the exhibit "Material Evidence: Chicago Architecture @ 2000." We were asked to consider issues of materiality in relation to the program of a newsstand, which was constructed full-scale and installed at the museum. The IN.FOrmant.system refers to a future microurbanism of many structures in the city dispensing information in variable ways.

The prototype as constructed at the museum demonstrated three ideas relative to materiality: first, that the interaction of even a small palette of materials, both conventional and new, can be treated as a flow of matter; second, that this performance is conceived and constructed using parametric modeling techniques inherent to animation software; and finally, that the material and spatial effects produced by these two ideas may collaborate with and expand the given program of a newsstand.

# Who or what experience has been a major influence on your career?

I have had the benefit of many amazing teachers, so it would be hard to single out even a few. Other influences include having the opportunity to travel as a student in Italy and as a Skidmore, Owings & Merrill (SOM) Traveling Fellowship recipient through India and Asia.

#### Profile of the Profession

According to the Bureau of Labor Statistics, U.S. Department of Labor, 6 132,000 architects were practicing in the United States in 2006, the last year for which statistics are available. Employment projections for the occupation of architect are expected to grow by 23,000 (18 percent) between 2006 and 2016. The employment of architects is projected to grow faster than average for all occupations through 2016, and additional job openings will stem from the need to replace architects who retire, transfer to new occupations, or leave the labor force permanently for other reasons. Growth in construction, particularly of such nonresidential structures as office buildings, shopping centers, schools, and health care facilities, is expected to spur employment.

With this projected growth of the profession, should you consider architecture? Before you answer, consider the following. According to the National Architectural Accrediting Board (NAAB),<sup>7</sup> 29,133 students were studying architecture in professional degree programs in the United States during the 2007–2008 academic year. Further, 5,781 students graduated with the NAAB-accredited degree. If you assume that the number of graduates with the accredited degree remains the same for 2006–2016, the projected time frame, 57,810 individuals with an NAAB-accredited degree may be competing for the projected 23,000 openings. Clearly, based on employment projections, the competition for architectural positions will be keen over the next decade. Take solace, though, because graduates with an architectural education may enter many career fields other than architecture; see Chapter 4, "The Careers of an Architect."

In its 2008 survey of registered architects, the National Council of Architectural Registration Boards<sup>8</sup> (NCARB) reports 104,126 registered architects living in the 55 reporting jurisdictions, including all 50 states, the District of Columbia, Guam, the Northern Mariana Islands, Puerto Rico, and the Virgin Islands. This total is an approximate 7 percent decrease from the previous year's survey.

While the AIA<sup>9</sup> does not represent the entire profession, its membership does constitute a majority. Therefore, it is worth reporting its facts and figures. Of the nearly 83,000 members of the AIA, 68 percent (56,440) are licensed architects. The remaining ones are associate or allied members.

Of all AIA architect members, 81 percent practice in architecture firms, 2 percent practice in the corporate sector, and 2 percent practice in government, while the remaining ones practice at design firms, universities or schools, contractors' or builder firms, and engineering firms.

#### **SALARY**

According to the Bureau of Labor Statistics, U.S. Department of Labor, <sup>10</sup> the 2007 median annual earnings of wage and salary architects were \$64,150. The middle 50 percent earned between \$49,780 and \$83,450. The lowest 10 percent earned less than \$39,420, and the highest 10 percent earned more than \$104,970. Salaries fluctuate, depending on the region of the country, the amount of experience an individual has, and even the type of employer.

Further data on the salaries of architects is provided by the 2009 Compensation and Benefits Survey published by Design Intelligence. According to this survey from 460 professional practice locations, interns with one year's experience earn a mean salary of \$39,680 and those with three years experience earn \$47,043. Licensed architects with five to nine years of experience earn a mean salary of \$60,825, and those who have over 20 years of experience earn \$100,723. Individuals in leadership positions, associate principals, earn a mean salary of \$106,333, while principals earn \$147,452.

Finally, data from the 2008 AIA Compensation Survey<sup>12</sup> reports the following salaries: senior design/project management staff, \$98,800; architect/designer, \$71,600; and interns, \$45,400. These salaries represent a 6 percent increase from the previous survey in 2005. Of course, these salaries were also collected prior to the economic downturn in the latter part of 2008 and early 2009.

#### **DIVERSITY**

What is diversity, and why is it important? The following answer is from *Designing for Diversity*, by Kathryn H. Anthony, Ph.D.:

Diversity is a set of human traits that have an impact on individuals' values, opportunities, and perceptions of self and others at work. At minimum, it includes six core dimensions: age, ethnicity, gender, mental or physical abilities, race, and sexual orientation.<sup>13</sup>

In the context of the architectural profession, diversity is extremely important because, for many years, the profession has been known as a white man's profession. This label is no longer appropriate, as the profession is beginning to make strides, but consider the representation of women and individuals of color. Again, the AIA is the most reliable source for estimates.

According to the AIA, 10 percent (about 7,500) of full members are women, and eight percent (about 6,000) are individuals of color. Within the schools, the numbers are dramatically better. According to the NAAB, the percentage of female students pursuing architecture in accredited professional degree programs is 41 percent (11,985). Twenty-nine percent of students (8,446) are individuals of color.

# What are the most important skills an architect needs to be successful?

> Self-awareness: a well-rounded experience is good, but focus on your specific talents and skills that you enjoy.

#### Amy Yurko, AIA, Founder/Director, BrainSpaces

> To be successful, you must be able to adapt to your surroundings. You must be a good communicator and, more importantly, a good listener. You must be open to taking risks and looking at things in a different way.

#### H. Alan Brangman, AIA, University Architect, Georgetown University

To be successful professionally and personally as an architect, passion, the courage to create, the ability to listen, communication, collaborative spirit, and perseverance are all essential.

#### Diane Blair Black, AIA, Vice-President, RTKL Associates, Inc.

> Creativity, design, technical skills, management, communication and excellent leadership skills are required. It requires a very high level of maturity.

#### Robert D. Fox, AIA, IIDA, Principal, FOX Architects

Architects must have the following skills (the order depends on the individual): (a) excellent communication skills (e.g., writing, speaking, and traditional and digital drawing ability); (b) tolerance for ambiguity; (c) agility; (d) an analytical mind; (e) attention to both the macro and the micro; (f) humility; and (g) graphical diagramming.

Thomas Fowler, IV, AIA, Professor and Director, Collaborative Integrative-Interdisciplinary Digital-Design Studio (CIDS), California Polytechnic State University-San Luis Obispo

Learning to communicate both visually and verbally is critical. Design work must be able to speak for itself, with no verbal explanation. In addition, however, architects must learn effective oral communication skills. They must practice their presentations over and over again, and they must learn

from their mistakes. They also must learn how to be attentive listeners, as understanding the needs of clients and users is critical to a successful practice with repeat clients.

### Kathryn H. Anthony, Ph.D., Professor, University of Illinois at Urbana-Champaign

> Communication is the most important skill. An architect must be able to communicate with clients differently than with contractors. An architect must be able to present in front of a 12-person board of directors or a married couple. An architect must create written proposals and reports in the morning, then must turn around and create a massing diagram sketch or stair detail later in the day. An architect must be able to explain a technical aspect of a project in a project meeting just as well as attempt to convince a client of an aesthetic idea in a design.

#### F. Michael Ayles, AIA, Principal, Business Development, Antinozzi Associates

Every architect must have two attributes. First is the ability to deal with ambiguous problems. Architectural problems, while often complex, cannot, for the most part, be reduced to a single optimized answer. Typically, architectural problems have many possible solutions. The answer often lies not in finding the *right* solution but in finding the *best* solution. Le Corbusier, one of the twentieth century's greatest architects, described finding architectural solutions "as a patient search."

The second attribute is curiosity. Architecture is not a static profession. What you learn in a formal education is just the beginning. To be a successful architect, especially in this age of rapid change, you must acquire new knowledge and skills nearly every day. To do this, you need insatiable curiosity that drives you to know more and to continue a process of lifelong learning.

#### What are the most important skills an architect needs to be successful?(Continued)

Notice I have talked about attributes rather than skills. I believe these personal attributes are more important than learned skills. I do not mean to skip the skills issue. The necessary skills are basic—reading, writing, and arithmetic in all their current manifestations—plus communication skills, leadership skills, cognitive skills, and—I think the most important skill of all—the skill to imagine unbuilt worlds.

Robert M. Beckley, FAIA, Professor and Dean Emeritus, University of Michigan



Cosmonaut Museum, Moscow, Russia. PHOTOGRAPHER: TED SHELTON, AIA.

> Patience, willingness to listen, good personal skills in dealing with clients, and last but not least, ability to design.

John W. Myefski, AIA, Principal, Myefski Cook Architects, Inc.

> Self-knowledge. Exercise your capacity for self-learning as soon as you can—understand how deeply you want to be an architect and reflect on it throughout your decision-making [sic]. For some, the want is a passion or obsession; for others, it is a curiosity that grows over time. These people require alternate paths.

Travel. Observe and talk to people. Travel may be the greatest teacher.

Do not worry about failure. Follow the maxim of IBM's Thomas Watson Jr.: "Want to succeed faster? Accelerate your rate of failure!" Have the courage to take that risk!

Joseph Bilello, Ph.D., AIA, Professor and Former Dean, Ball State University

The most important skill is listening. I find that too many architects do not listen well; it takes practice.

William J. Carpenter, Ph.D., FAIA, Associate Professor, Southern Polytechnic State University; President, Lightroom

> To observe and to listen, and translate the information gained into a meaningful medium that can be understood by clients. Architecture is not about you and what you want; it is about your clients and working as a team to achieve their goals. You can educate them, which is critical, but you must step back from your own ego-based agenda and serve them. This does not mean the design is compromised; it just means you know and honor the constraints.

Barbara Crisp, Principal, bcrisp, llc

The two most important skills for success in architecture are critical thinking and problem solving. I used to think creativity was the most vital skill for an architect to possess; however, I have come to realize that creativity alone does not produce substance. A rational thinker who knows architectural history and has a strong design process will make good architecture.

Margaret DeLeeuw, Marketing Director, Celli-Flynn Brennan Architects & Planners

A creative sensibility, the ability to solve complex issues without precedents to follow, and a commitment to the discipline.

Douglas Garofalo, FAIA, Professor, University of Illinois at Chicago, President, Garofalo Architects, Inc.

> Good communication skills. Architecture is a collaborative process and requires that architects be good team players as well as leaders.

Lynsey Jane Gemmell, AIA, Project Manager/Associate, Holabird & Root

**)** Be both patient and persistent. Often the work of the architect is a series of compromises.

Christopher J. Gribbs, Associate AIA, Senior Director, American Institute of Architects

An architect must be open-minded and able to constantly evaluate and reevaluate every decision. Also—this isn't really a skill—an architect must realize you do not need to reinvent the wheel with every design; they don't teach you this in school. So many beautiful and efficient structures already exist; we need not create something unique every day. We can be creative, but we must learn from the past and try to make it better.

David R. Groff, Master of Architecture Candidate, Virginia Tech-Washington Alexandria Architecture Center

Patience, diligence—because architectural education is so rigorous, diligence is a must—attention to detail, and passion. I know I still want to be an architect because my passion for creating is undiminished.

Michelle Hunter, Lead Designer, Mark Gould Architect



Chicago Townhomes, Chicago. PHOTOGRAPHER: ISABELLE GOURNAY.

#### What are the most important skills an architect needs to be successful?(Continued)

Sensitivity. Architects must understand what the environment and the end user need and want. Architects cannot properly respond to the needs of the end user if they are not sensitive to the need. The need may be structural, environmental, aesthetic, climatic, religious, or a combination of these elements—or others.

#### Ahkilah J. Johnson, Chief of Staff Investment Services, Cherokee Northeast, LLC

> Collaboration, teamwork, and people skills are probably the most important and most undervalued skills an architect needs in today's professional practice. But perhaps most importantly, the ability to work collaboratively with clients, to lead them through the project process, can make the difference between a good project and a great one.

#### Carolyn G. Jones, AIA, Director, Callison

**>** Patience, an ability to see things in a positive way, an ability to listen, and a creative spirit.

#### Courtney Miller-Bellairs, Assistant Director/Senior Lecturer, Architecture Program, University of Maryland

➤ Having a good eye is one of the most important attributes of a successful architect, but "a good eye" is difficult to describe in words. It affects your projects, your presentations to clients, your marketing efforts to obtain new projects—everything.

Being good with your hands is important, especially in building models but also to get a tactile feel for materials and how they are put together in the field.

Strong writing is also important for architects. Writing is critical to obtaining jobs or awards, preparing contracts, and developing complete and accurate specifications for a particular project.

Enjoying the social aspects and challenges of working with people is very important. Every real-world

project involves teamwork. Often, multiple consultants are involved, sometimes multiple clients, always many people who do not always naturally communicate well with each other! It is always the architect's job to keep the lines of communication open via drawings, meetings, conference calls, and so on.

#### Elizabeth Kalin, Architectural Intern, Studio Gang Architects

**)** Observation; graphic and verbal communication skills; tenacity, perseverance, and fortitude.

#### Mary Kay Lanzillotta, FAIA, Partner, Hartman-Cox Architects

**)** Communication; positive attitude; critical thinking; and flexibility.

### Lynn N. Simon, AIA, LEED AP, President, Simon & Associates, Inc.

Leadership is the most important skill an architect can possess. As the client's advocate and the head of the consultant team, the architect must maintain an overview of the project and provide consistent guidance to ensure its success as well as the long-lasting relationships developed during its course. A great leader is a skilled at listening, showing empathy, and creating a vision.

#### Grace H. Kim, AIA, Principal, Schemata Workshop, Inc.

> Passion and compassion, critical reasoning and problem solving, leadership and collaboration, communication and patience, and determination and faith. It is the careful balance of these relationships that lead to success in architecture.

#### Margaret R. Tarampi, Associate AIA, Doctor of Philosophy Candidate, University of Utah

I have found that people who like to solve puzzles can do well in architecture. Getting a building designed and through construction takes a tremendous amount of patience and keeping your eye on



Rotunda, University of Virginia, Charlottesville, Virginia, Architect: Thomas Jefferson, PHOTOGRAPHER: R. LINDLEY VANN.

the big picture. In my opinion, the design of the building is the easy part. Turning that design into something the owner approves, figuring out the detailing, coming in on budget, getting approved by the local community, and working within applicable building and zoning codes requires tremendous focus.

Playing psychiatrist to clients is another critical quality. Balancing various client representatives' demands, whether for a couple or a board of directors, requires listening carefully to them and coming up with solutions that satisfy all of their important criteria. They may have other agendas in getting design solutions to go their way, so I find I have to handle their requests carefully.

Excellent design skills are a given to being an architectural designer. However, being an architect does not necessarily mean being a great designer. Few people involved in the profession of architecture are designers. Many are office managers, specification writers, marketing personnel, architectural critics who write for newspapers or magazines, people who work at banks and for developers to review projects, and so on.

Nathan Kipnis, AIA, Principal, Nathan Kipnis Architects, Inc.

The most important skills are communication, imagination, communication, problem solving, and communication. Architects must have the imagination to dream up the vision of clients, the communication skills to articulate that vision so the client can understand it, and the ability to resolve complex variables in order to make that vision a reality. The fundamentals of math, science, and art are relevant, but they are tools that support imagination, communication, and problem solving.

#### Shannon Kraus, AIA, MBA, Vice-President, HKS

> Verbal, written, and graphic communication skills are the most important needed to be a successful architect. Since there are many players involved in a building being designed and built, clear communication is imperative to convey your ideas to others.

#### Robert D. Roubik, AIA, LEED AP, Project Architect, Antunovich Associates Architects and Planners

Passion. The education of an architect requires such time and energy that without passion the pursuit of such an understanding is pointless. Communication skills, verbal, written, and graphic, are essential to architectural success. Great ideas never become reality if no one else can understand them and build them.

Allison Wilson, Bachelor of Science Graduate, University of Maryland

#### What are the most important skills an architect needs to be successful?(Continued)

> Communication is the most important of all skills. Without the ability to communicate orally, in writing, and through graphics, one probably cannot be a successful architect. Through communications one interacts with clients, the community, and the people with whom one learns and works. Though an architect may have outstanding strengths in one area of communication, few are successful without being professionally competent in all three.

#### Clark E. Llewellyn, AIA, Dean, University of Hawaii

Architects must have the ability to be creative (which includes the creative use of precedents). They must be able to think at different scales (simultaneously). They must have the ability to inspire confidence (which is conveyed largely by listening). They must have the ability to communicate ideas (either orally or in writing, as well as through drawing). Finally, they must have the ability to be able to tell good stories.

#### Casius Pealer, J.D., Assistant General Counsel (Real Estate), District of Columbia Housing Authority; Cofounder, ARCHVoices

An architect must be resourceful. The myriad of regulations, building codes, materials, products and rules of thumb are impossible to commit to memory. An architect must know where to go to find answers to best solve the design problem. Moreover, because the architect is responsible for coordinating an entire team of professionals, he/ she must have very good organization skills and people skills. Finally, the ability to imagine objects in three dimensions is paramount.

Kathy Denise Dixon, AIA, NOMA, Associate Principal, Arel Architects, Inc.

All architects must be able to communicate well in a variety of media. Other important skills include speaking, writing, critical thinking, and problem solving. Also, an understanding of business finance is important, as the measure of a successful project is more than aesthetics and function. My personal goal on every project is to learn at least one item that will enable me to increase my creativity or productivity.

#### Kathryn T. Prigmore, FAIA, Project Manager, HDR Architecture

Architects require collaboration, visionary ideas, persistence, optimism, and the scale of pragmatism and idealism, tipping more toward idealism.

#### Patricia Saldana Natke, AIA, Principal and President, Urban Works Ltd.

As cliché as it sounds, communication is the most important skill an architect uses. The language we use when we talk among ourselves is unintelligible to most clients. Even our visual expressions are often misinterpreted or misunderstood. The sophisticated computer programs we employ are no substitute for confident and articulate faceto-face communication.

### W. Stephen Saunders, AIA, Principal, Eckenhoff Saunders Architects, Inc.

An architect's most important skills are interpretive in nature so that the problems and needs of the client can be solved and provided for in a way that addresses the previous question. A broad understanding of how spatial relationships and proportions influence and enhance the lives of people who use certain buildings is also important. The leadership skills necessary to implement those designs through advocating and describing their advantages are also important.

Ambassador Richard N. Swett (r), FAIA, President, Swett Associates, Inc.

#### Teaches about People and Places

KATHRYN H. ANTHONY, PH.D.

**Professor** 

School of Architecture

**Department of Landscape Architecture** 

Gender and Women's Studies Program

University of Illinois at Urbana-Champaign

Champaign, Illinois

# Why and how did you become an architecture professor?

I have had a lifelong fascination with architecture, especially the social and psychological relationships among people, places, and spaces. My father is a retired professor of city planning who also studied architecture, and while in France he worked for LeCorbusier. I have early memories of visits to my father's office in Avery Hall at Columbia University, intrigued by all the architectural drawings and models displayed throughout the corridors. I was also fortunate to travel with my family throughout Europe. Several visits were to contemporary urban design projects and new towns, topics of my father's university lectures.

# Why and how did you decide on which school to attend for your architecture degree? What degree(s) do you possess?

I was an undergraduate student in psychology at the University of California, Berkeley. During my final year, I discovered the new field of environmental psychology and enrolled in a course on this subject. After purchasing all three required textbooks, I could not put them down. I read them

all during the first week of the term. This had never happened before, and I realized that I had found my niche. After I received my bachelor of arts in psychology, I remained at Berkeley to complete my Ph.D. in architecture with a specialty in social and behavioral factors in design.

# You have written two books that help inform both the education and practice of architecture—Design Juries on Trial: The Renaissance of the Design Studio and Designing for Diversity: Gender, Race, and Ethnicity in the Architectural Profession. How can architecture students learn from your research on design juries?

> My research on design juries has much to offer architecture students about both the jury process and, more generally, the design studio. The traditional academic design jury is an outmoded model that is all too often inefficient and ineffective. After reading my book, students will become more empowered to take charge of their academic careers.

By reading about the experiences of over 900 students, faculty, and leading practitioners, students will have greater confidence to prepare and present their design projects both in school and in professional practice. They will learn how to work more efficiently in design studio, and how to use research to better understand the design program at hand. *Design Juries on Trial* presents students and faculty with several alternate models to evaluate design work that involve greater student participation and higher levels of learning.

#### How did you first become interested in diversity?

My ethnic heritage is 100 percent Greek. When I was ages three, six, and nine, my family spent



Next stop: Paradise. A Hospice for Spiritual Healing—Master's Thesis by Christina A. Mooney at the University of Illinois at Urbana-Champaign. Faculty: Kathryn H. Anthony, Ph.D.

the summers in Greece visiting relatives in Athens and on the island of Skyros. I was struck by the unusual ways that Greeks used time and space. For example, mid-day siestas allowed young children to play outside late at night in busy *plateias* (plazas) while their parents dined with friends and neighbors at the local taverna. Small-scale private spaces encouraged greater use of the public realm.

As a graduate student I spent three years in the International House at the University of California, Berkeley, where over 600 students, half American, half from all over the world, ate three meals a day together and lived under one roof. Short of living abroad, it is hard to imagine a more immersive environment to learn about cultural and ethnic diversity. Even today, some of my best friends are those I met at I House.

### Why is the topic of "diversity" important for architects?

Diversity is one of the most important issues for today's architects. The built environment reflects our culture, and vice versa. If our buildings, spaces, and places continue to be designed by a relatively homogenous group of people, what message does that send about our culture? The lack of diversity in the architectural profession impedes progress not only in that field but also in American society at large.

Discrimination in the architectural profession can lead to discrimination in how we all use the built environment, and it has done so for years. Architects must pay greater attention to the needs of women, persons of color, gays and lesbians, and persons with physical disabilities, all of whom—until recently—have historically been treated as second-class citizens in the built environment. So-called "minorities" have already become the majority in many American cities and that trend will only increase.

# What do you like about research, teaching, and writing?

Description by By far the most appealing aspect of research, teaching, and writing is creativity. Research and writing offer the opportunity to examine issues that have been previously unexplored. One has a chance to carve out new ground, and this is exciting. For example, while *Design Juries on Trial* is not the final word on this topic, it was one of the first examples of empirical research on design juries, and for this it remains significant. This is also true for my second book, *Designing for Diversity*, one of the first books to address how women and persons of color fare in the architectural profession compared to their white male counterparts, and it too is based on empirical research.

As a female scholar in architectural education, my writings have had a special slant, and I believe that I have made a mark in the field. My aim in both books has been to create a more humane environment in both architectural education and practice.

Teaching is another creative endeavor. One of my favorite aspects of teaching is to see a student flourish outside the university. An idea that started as a casual discussion during office hours germinates into a significant body of work presented at a national venue. It is an amazing metamorphosis, and it is gratifying to watch students discuss their work with leading scholars from around the world. Similarly, I appreciate hearing from alumni long after they

▼ 1924 Dutch Colonial Residence, Urbana, Illinois. Architect: URBANWorks, Ltd./Codesigner and Client: Kathryn H. Anthony, Ph.D. PHOTOGRAPHER: LARRY KANFER, LARRY KANFER PHOTOGRAPHY. © LARRY KANFER PHOTOGRAPHY, WWW.KANFER.COM.

graduate and learning about their accomplishments, both professional and personal. It underscores how fortunate we are as educators to cross paths with them during their most formative years.

# How has architecture and design impacted your everyday life?

have lived for almost 25 years, always had plenty of character, charm, and curb appeal. Yet it also had two major drawbacks: a tiny apartment-sized galley kitchen and only one bathroom. Together with URBANWorks Ltd., a Chicago architectural firm that promotes diversity, we designed an unusual "21st century octagon," a kitchen/bath addition that received an award from our local Preservation and Conservation Association. Top priority throughout the design process was to integrate with and enhance the architectural integrity of the original structure. With sun streaming in from all directions





1924 Dutch Colonial Residence, Urbana, Illinois. Architect: URBANWorks, Ltd./Codesigner and Client: Kathryn H. Anthony, Ph.D. PHOTOGRAPHER: LARRY KANFER, LARRY KANFER PHOTOGRAPHY. © LARRY KANFER PHOTOGRAPHY, WWW.KANFER.COM.

and gorgeous views of nature, the new space totally transformed my home. Some of my favorite design surprises: a full moon shining from the clerestory windows, reflecting prisms along the walls when the sun shines on my silestone countertops, and, on a wintry day, feeling like I'm in the middle of a snow globe. At its best, architecture can work magic.

# Who or what experience has been a major influence on your career?

No doubt that my father's career as a professor of city planning and a principal in a city planning consulting office was a major influence. Without it, I may have chosen a career in healthcare, as a counselor or therapist, or in journalism—but probably not in architecture. My mother taught me the value of listening and understanding.

My mentors in graduate school also had a strong influence. Robert Sommer, a psychologist at the University of California at Davis, taught me the importance of writing scholarly research for a wide variety of audiences along with the value of writing in a style that the average layperson could understand.

Clare Cooper Marcus, a retired professor of architecture and landscape architecture at the University of California at Berkeley, taught me the need to examine environment-behavior research topics that could have far-reaching psychological impacts. Galen Cranz, a professor of architecture at Berkeley, provided thoughtful critiques of my student work and helped me become a much better writer than before.

After I joined the faculty of the University of Illinois, my colleagues James Anderson and Sue Weidemann provided excellent role models as scholars who engaged in high-caliber environment-behavior research and who interacted well with their students and colleagues.

My late husband, Barry Riccio, a historian, was an excellent wordsmith and a top-notch writer who often critiqued my manuscripts. He helped me come up with the title for *Design Juries on Trial* and other publications. Several have alliteration in their titles—a favorite trademark of his. My personal experiences with Barry's seven-year long battle with a rare form of cancer also had an impact on my career.

#### Architecture: Connectivity + Community

PATRICIA SALDAŃA NATKE, AIA Principal and President Urban Works Ltd. Chicago, Illinois

#### Why and how did you become an architect?

I grew up on the south side of Chicago, in an area referred to as Back of the Yards—the famed "Stockyards" of Chicago. I am a first generation Mexican American; both of my parents are from Zacatecas, Mexico. One day, my parents needed to go to downtown Chicago to address passport renewal issues. We took a long bus ride (or what appeared to be a lengthy ride for an eight-yearold). When we arrived in the center of the Chicago Loop area, I was mesmerized by the skyscrapers, the expanse of the green space in Grant Park, and the reflectiveness of the windows and metal on the building skins. I recall being breathless as I entered the Federal Building (Mies)—the sheer size of lobby and the simplicity of the materials. I wanted to know why there were not any majestic places and green spaces where I lived? I did not know what an architect did—but I knew that I wanted to change my neighborhood for the better. Therefore, I became an "architect" at a very early age.

# Why and how did you decide on which school to attend for your architecture degree? What degree(s) do you possess?

I wanted to attend a school somewhat close to home. Since I lived in Chicago, I applied to Illinois Institute of Technology (IIT) and University of Illinois at Urbana Champaign (UIUC). I was accepted at both and chose UIUC after attending a minority recruitment event at which my mother and I were invited to spend the weekend on the campus. I earned a bachelor of science in architectural studies from UIUC.

# What has been your greatest challenge as an architect/principal?

Time! The flow of creative ideas and desire to search for innovative solutions comes easily, but the execution of the idea requires adequate time. My equally greatest challenge is the educating of clients.



Westhaven Development, Mixed Income Housing, Chicago. Architect: Urban Works, Ltd. PHOTOGRAPHER: ANTHONY MAY PHOTOGRAPHY.



Benito Juarez High School Performing Art Center, Chicago. Architect: Urban Works, Ltd.

This is a challenge that I find exhilarating. Inspiring clients to take a risk, to think outside of the box, to visualize (although technology has finally made a leap), and put full trust in us as designers.

# How did you name your firm, Urban Works, Ltd.? Why "urban" and not "architecture?"

➤ Urban refers to the entire realm of the urban city—all major metropolitan cities, local and global. "Urban Works" signifies that we have a unique capacity to convey the shifting conditions of a modern urban city.

# Why has the architectural profession been unable to attract more minorities to its ranks, in particular Hispanic?

I believe it may be due to socioeconomic conditions as well as some cultural issues. In addition, there are very few role models in schools, universities, and the work force. I have always led my career path with a mindset that I would overcome all obstacles—and yes the obstacles are greater—but I never expected prescriptive solutions.

# You are a past national diversity chair of the American Institute of Architects (AIA) and your firm profile states "celebrate diversity." Why is diversity important in the architectural profession?

The profession has an obligation to the public. That public is diverse. The AIA has finally implemented the funded 2020 Vision for Architecture, developing a cohesive system for collecting demographic data on the profession, and a methodology for analyzing and publishing the information.

# You have been involved with a number of community service including professional associations, neighborhoods groups, and area schools. Why is it important for you to be involved with this community service?

There is such under representation in local communities that I merely want to assist in representing the voice of others whom may not be able to voice their opinion. Plus, diverse architects bring valuable perspective to the design and definition of livable communities. Buildings become a part of history—they should be reflective of their current

time, place, and inhabitants. Currently, a very large segment of society has little to no influence on our architectural history. It is a crisis!

### What are your primary responsibilities and duties?

I am the principal in charge of design. I provide the design direction on key projects in the office. In addition, I handle the marketing and business development for my office.

# What is the most/least satisfying part of your job?

Truly the most satisfying is the completion of a space or building. To think back to its genesis, embedded with human thought and labor, and made into a physical object. The least satisfying is contract negotiations. Each time we must negotiate a contract fee, it reminds me that society views our work with a finite value.

# Who or what experience has been a major influence on your career?

The greatest honor is to have had inspirational architects/individuals that influenced my career.

- Carol Ross Barney, FAIA, of Ross Barney Architects—while I was employed at her firm in the 1990s. I am grateful for her vision and persistence.
- Dan Wheeler, FAIA, of Wheeler Kearns—I taught with him at University of Illinois at Chicago (UIC), and I value his brilliance and optimistic quest for excellence.
- Rafael Hernandez—He was the executive director of Hispanic American Construction Industry Association (HACIA) and winner of the 2003 AIA Whitney Young Award. I appreciate his endless support and confidence in the potential success of my firm.
- Stanley Tigerman and Eva Maddox, Archeworks (2002–present)—I taught with them at Archeworks, and I value their tireless commitment to socially responsible design.
- Bradley Lynch, Brininstool + Lynch (2004–present)—I taught with him at Archeworks, where he taught me of the poetics of elegant minimalism.



Instituto del Progresso Latino Community Center Design, Chicago. Architect: Urban Works, Ltd. PHOTOGRAPHER: PHILIP SCHMIDT.

#### Leadership by Design

#### AMBASSADOR RICHARD N. SWETT (R), FAIA

**President** 

Swett Associates, Inc.

Concord, New Hampshire

#### Why and how did you become an architect?

There are four clear reasons why I became an architect.

My father was a civil engineer who started, owned, and operated a construction company in the northeast since I was two years old. I grew up in the construction environment and ultimately worked for him as a laborer in the trenches and with him as a partner developing alternative energy biomass power plants and sustainable communities around them to utilize the thermal waste in an efficient centralized heating system in the mid-1980s, long before global warming and sustainable design were publicly discussed.

As a sixth grader, I remember doing a project that fascinated me. It entailed creating an Aztec city on a 4' by 8' piece of plywood that included pyramids and temples, roads and canals, residential districts, and government centers. I learned a great deal about the relationship between transportation, habitation, and the infrastructure required to make living in an ancient city possible and comfortable.

As a junior in high school, I was the student representative on my town's new high school building committee, which oversaw the creation of its own high school. Up to that point, students, like me, attended a regional high school in the neighboring larger community. Serving in this capacity provid-

ed me access and participation rights to the process of designing this new school. Although I did not say much, I watched and took note of the role the architects played in shaping and directing the needs and desires of the town. I was also intrigued by the way everyone had to work out differences and work together to achieve this goal.

While at Yale I had a course that studied the relationship of the architect with the community as he or she worked to gain consensus regarding a project that was being designed. I spent the semester shadowing an architect in Boston who worked for the Boston Redevelopment Authority as he designed a mixed-use senior housing building with retail space on the ground floor in the North End, or Italian neighborhood of Boston. I attended numerous community meetings, discussed with the architect and the community their concerns for the new concept of combining uses in one building, and watched as the architect slowly and successfully brought about consensus where opposition first existed.

These seminal experiences are the foundation upon which my entry into the profession was built. Interestingly, although I also enjoyed drawing and design, my interests lay more with the relationships between architect and client and client and community, antecedents to my entry into the public realm.

# Why and how did you decide on which school to attend for your architecture degree? What degree(s) do you possess?

I ended up at Yale University as an undergraduate for several reasons, although I was accepted at all the Ivy League schools to which I applied. My original intention was to study engineering; my father was the greatest influence in my life, and



President Bill Clinton, Ambassador Richard N. Swett, David Putnam of Markem Industries, Keene, New Hampshire

architecture had only recently been introduced as an option. My father was a Yale graduate from the School of Engineering, and being an independent Yankee, I did not want to follow in his footsteps on his coattails, so I was determined to demonstrate my entrance into the collegiate ranks on my own. When all my applications were accepted at Harvard, Penn, Brown, and Yale, I could matriculate to New Haven without feeling it was only because of the legacy relationship.

At Yale, I was also intent on playing football and using that as a springboard into professional sports. I figured that any injury I might endure, if a career stopper, would not diminish my professional poten-

tial, as I would still graduate with an Ivy League degree. Well, two things changed my plans of being an engineer who played football into being an architect who aspired to compete in the Olympics. I was able to attend the Montreal Olympics where I saw Bruce Jenner win the gold medal in the decathlon, and I found my courses in architecture more to my liking than my engineering courses at Yale. So I dropped out of the football program, took up the decathlon on the track team, and switched my major to architecture. I graduated from Yale College with a B.A. in architecture and as the holder of the university decathlon record (which I still hold). In the professional world I applied and was accepted to seven graduate architecture programs as well as several business schools, but I never attended any of them as I was fully occupied with professional pursuits having obtained my professional license in the State of California through the apprentice program in place at the time.

### What has been your greatest challenge as an architect?

My greatest challenges exist at opposite ends of my career. In the beginning, when I first went out on my own, I had a design build firm in California. One of my first projects was a residential project that was with a client that refused to pay a substantial portion of the project cost. It ended up being the business school education I had decided not to attend as a graduate student, both in what I learned from it and what it cost me, financially.

The other is my recent position as a managing principal in one of the country's largest architecture and engineering firms. I came into an office in Washington, DC, that was without leadership and without a backlog of work. For the last year I had been rebuilding these two very important components necessary for success back into the

office's operations. This work is now challenged by the greatest recession, possibly depression, since the depression of 1929. Still, the firm made tremendous strides and I am confident the office will emerge at the other end of the economic down cycle more vibrant, productive, and profitable than it was.

# What led to your involvement in leadership roles in your professional and public life?

My stint as a developer of alternative energy biomass power plants was the part of my professional life that politicized me the most. I had to act and understand how to work with community planning organizations, environmental groups, etc., as a developer. As I became more familiar with the political process and how to engage in it, I realized how narrow and polarized most participants' viewpoints were. My natural inclinations as an architect and consensus builder made me move naturally into leadership positions where I served to build bridges between groups that otherwise were at an impasse.

# How did your background in architecture prepare you as a U.S. Representative and Ambassador to Denmark?

When I ran for the U.S. House of Representatives, one of my slogans I liked to use was, "I am running to serve in the People's House, and every house deserves a good architect." Throughout my first campaign I drew the analogy of managing the government's budget, which was in the worst deficit condition ever in the country's history to how Americans manage their own homes. I would say we would not build additions to our houses as much as we would like to if we did not have the money to do so, so why should we continue to expand the government's budget? At the time we were entering the savings and loan crisis, a milder form of today's troubles, and the analogy had resonance with the public.

In Denmark, I built my service on four cornerstones of activity, drawing upon my experience gained in Congress. Knowing that our foreign service tended to be reactionary instead of proactive to events, I set out four ways that we could engage with our host country that would establish long-term relationships worthy of preservation. That way, when difficulties came, everyone would be motivated to work for their solution because there were greater relationships to be preserved at stake. The four cornerstones we identified were Regional Security, Economics and Trade, Human Rights Issues, and Design Diplomacy. The last category was an obvious tip of our hat to the Dane's wonderful sense of design and the high value they placed in it. My architectural background gave me the ability to identify with this important aspect of their national character and to engage with them in ways that enabled them to positively influence America's somewhat lower commitment to design quality and its positive impact on the quality of life in the community.

# Why did you write Leadership by Design: Creating an Architecture of Trust?

I was frustrated, and still am frustrated, by the divisive and polarized quality of our elected officials' service. As the only architect to serve in Congress in the twentieth century, I am also painfully aware of the lack of leadership the profession is providing to fix this problem. In fact, our lack of interest in developing our leadership skills impacts our own practices and profession in immediate ways that make it difficult to manage day-to-day operations, let alone influence national public policy.

The book was written for three reasons: (1) as an outlet for the frustrations that had built up inside me as I went through the various stages of my career and saw the problems that could be solved by



Ambassador Richard N. Swett, Secretary of Defense William S. Cohen.

leaders with the inclusive problem-solving skills similar to those used by architects in the design process, (2) as an instructive manual to motivate members of the design professions to step up and become leaders in their professions and communities, and (3) as an instructive manual to motivate members of the broader community to think about how public leaders can actually be inclusive problem solvers who engage the community at large in the process of finding solutions to the difficult problems they face.

# Why is it important for architects to be leaders in their community? How do they become involved?

This is the million-dollar question. During the 2008 presidential campaign, we witnessed two candidates calling out for change and unity. Both come to this position from different places. One has little experience working across the aisle, so to speak, while the other has been doing so for many years, although at times with a lack of diplomacy that has offended his own party. They both have no real experience of working in a systematic way to solve

problems that looks across the political horizon for solutions from both sides of the political spectrum. This is where the design process and architects could be very useful, for they are professionals who are energized by the opportunity to broaden their horizon of creative solutions, not reduced to fearfully restricting themselves to a narrow band of options defined by a single ideology. By being advocates for the use of the design process as a way to improve the quality of life for all members of their communities, design professionals have the ability to apply this approach to all aspects of that community, not just to enhancing the built environment and preserving the natural environment.

In Denmark, the Folketing, or Parliament, has a "design review" of all legislation to determine if it is in the best interest of the broadest swath of the population to be affected by it. This is a quality control check that truly believes that good design is a quality-of-life issue.

Becoming involved in the political process is both easy and difficult. It is easier to befriend public servants to help them understand the inclusive problem-solving process used by the design professions and incorporate these ideas into their platforms. It is more difficult in that it takes abundant time and energy to be persuasive in getting these points heard and adopted. More difficult still is the proposition of running for office. That can be very expensive and time-consuming, and it opens one to personal attacks that, if taken personally, can be quite painful. But is there much of an alternative as we see the quality of our public leaders continue to decline and diminish in their ability to solve these divisive and complex problems that face our world?

# What is the most/least satisfying part of your career as an architect?

The most satisfying part of my architecture career is being able to reshape the world around me

into a better place by engaging the community at large to the best extent possible in that process. The least satisfying is working with people in my profession who possess the potential to have the most positive impact but are just not able to realize their potential or sense the responsibility to do so.

# Who or what experience has been a major influence on your career?

I continue to believe that public service can be and is a noble service that requires the vision and problem-solving expertise possessed by architects, engineers, and people of the creative professions. My years of service in the public realm have taught me this and convinced me that we should strive to increase our influence and broaden our impact in order to improve our communities and the world around us.

#### The Architecture of Leadership

CAROLYN G. JONES, AIA
Director, Callison
Seattle, Washington

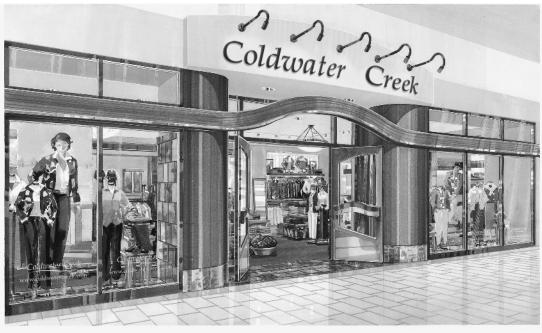
#### Why and how did you become an architect?

After taking an Introduction of Architecture class at a summer camp program in junior high, architectural design became one of my favorite hobbies. I would spend summers at my drafting table designing floor plans and building foam core models of houses. Despite my interest in architecture, I never thought of it as a career I wanted to pursue. I started college as an international studies major

without even considering architecture as an option. During the second semester of my freshman year, I decided to try Introduction to Architecture. Three weeks later I was an architecture major. There was no one reason I can name that convinced me to switch, I think that I was just instantly captivated by the buildings we were studying and could not imagine anything more rewarding than creating the built environment for a living.

# Why and how did you decide on which school to attend for your architecture degree? What degree(s) do you possess?

I have a five-year bachelor of architecture degree from the University of Notre Dame. Since I



STOREFRONT

Coldwater Creek International Plaza Retail Store, Tampa, Florida. Architect: Callison. RENDERING: BRIAN FISHER, PRESENTATION ARTS.

did not go to college to study architecture, it was pure luck that I even ended up at a school with an architecture program. I chose Notre Dame for its well-rounded liberal arts undergraduate program, its size, the campus atmosphere, and the student life it provided. It was more important to me to be at a school that felt like a great fit for me overall, with the strength of the specific program I was interested in being a secondary consideration.

As it turned out, I believe the specific program there did provide me with a very strong background and foundation for the study and practice of architecture. However, I truly believe that the most important part of my education, which has helped make me the architect as well as person that I am today, was based more my *entire* Notre Dame experience and less on the specifics of the architecture program.

# What is retail design and how might it be different from architecture design?

What makes retail design unique is the focus beyond just the traditional shell building to the interior architectural design as well as the visual merchandising. The design of the entire built environment, down to the smallest detail of a merchandise fixture, is part of what makes a retail space function.

I have never felt that interiors and architecture are two separate, distinct fields, and in retail design, the two are inseparable. From the architectural standpoint, retail design needs to be a seamless connection between interior and exterior spaces and forms.

The key is that in retail, the architecture serves as a backdrop to display the merchandise. You have to understand how product is displayed, how it best sells, how the customer interacts in or "shops" the space,

the impact of lighting, and the importance of setting a certain atmosphere through a combination of built environment, furniture, fixtures, and finishes.

#### What are your primary responsibilities and duties?

> As a project manager, my primary responsibilities are full oversight over the design and construction of a project from start to finish. Starting with monitoring the initial design and setting up the project team, schedule, and budget, I help lead the entire process all the way through construction. In the earlier project phases, I am primarily responsible for managing the internal project team and consultants to produce the documents, communication with the client's project manager, reviewing design decisions, working with the developer or landlord on coordination issues, and dealing with schedule, budget, and permitting. During construction, in addition to these activities, I work closely with the general contractor to keep the project moving forward in all aspects of contract administration, including biweekly site visits to monitor progress.

As a director at my firm, my responsibilities are much broader than working on individual projects. I help to manage a large client account that involves many skills beyond those necessary to execute projects. We work with the client directly to help manage workflow, project quality, schedules, and budgets. Internally I work with staffing to keep the project teams balanced with the right individuals. I also spend an extensive amount of time on personnel issues, helping others set and work towards their goals, dealing with problem situations, helping to maintain morale of the staff, etc. Directors also work with other groups and leadership throughout the firm on initiatives, task forces, and other business functions that affect broader aspects of how the office runs.

# What has been your greatest challenge as an architect?

My greatest challenge as an architect has been learning the necessary skills for my position that were not taught in school, mainly teamwork, management, and leadership. School focuses heavily on the achievement of the individual, but in the working world, success relies on working with others. It took me quite a few years to realize that my own hard work or talent meant very little, and in the end would not lead to much success, if I did not cooperate with and respect the input and contributions of others.

In some ways, I am less confident now than I was when I was first starting out in architecture. The longer you practice, the more you know, but you also become increasingly more aware of what you do not know. Sometimes that can be very overwhelming, but in the end you have to remember that you have an amazing support system in the resources and colleagues you build up over the years. Those people become part of your professional "team" who can help you achieve more than you ever could on your own.

# What challenges do you find in being both an architect and a mother?

In most ways, I face the same challenges as a working parent in any profession. Balancing work and family is never easy, and with architecture there is the occasional added pressure to work extra hours or late nights on project deadlines. Learning to work more efficiently in the time you do have is critical and often feels counterintuitive to what we have learned since the studio model in school. (Of course, the past experience of pulling all-nighters probably helped prepare me for life



Nordstrom, Fashion Island Mall, Newport Beach, California. Architect: Callison. RENDERING: AMY DIMARCO, AIA.

with a newborn!) I think most working parents would agree that it is frustrating to feel like you are ever really able to give 100 percent either at work or at home. It can be difficult to realign expectations of yourself and your career after working so hard to succeed at what you do.

What I do find very challenging specifically as an architect is the lack of role models of other working moms at the leadership level. Perhaps this is not unique to our profession, but it has been difficult to find many women in more advanced roles who also face the challenges of parenting young children. Many of the women in leadership have chosen not to have children and the others often have children quite a bit older, so I have found myself to be an exception in this regard. What I have come to realize is that I need to embrace the fact that I actually am that role model. It is an honor to be an example for others as a young firm leader and mom, learning the ropes of balancing a career and a family every day. I hope, by being a role model in this regard, I can help encourage the next generation of young architects, men and women, to find their own work/life/family balance. As a bigger vision, I also hope to help find a way to keep more talented women architects in the profession in the long run by encouraging them to find creative solutions to balancing their own families and careers.

#### What is the most/least satisfying part of your job?

What we often refer to as people issues are the both the most and least satisfying parts of my job. On the least satisfying side is dealing with office politics, staffing problems, or personnel issues. This might include how I get along with and fit in with other leaders in the company who I do not always agree with or who have different agendas, as well as helping staff who do not get along with each other learn to cooperate. More downsides include delivering tough messages to staff that are having serious performance issues and, in the worst case, having to lay off or even fire coworkers. Many days, the architecture challenges we face on projects seem quite manageable compared to keeping so many

talented and unique individuals working together in a positive, constructive way.

On the flip side, people issues are also the most rewarding part of my job. One of my favorite activities is working with staff to help them create and work towards their professional goals. Whether through our performance review process or more informal day-to-day coaching and mentoring, it is very rewarding to help facilitate the growth and learning of those around me. Although seeing a building you worked on get completed is still the pinnacle of satisfaction for me as an architect, it is followed closely by seeing people around me grow and succeed in their careers. It can often be challenging to find the time to spend with others in this development capacity, especially when you have so many pressing needs on your own projects, but the time spent connecting one-on-one with those you work with has intangible rewards. It is an honor to be in a leadership position where I can be a role model and mentor for other young architects.

# Who or what experience has been a major influence on your career?

been the mentors I have had. Two individuals in particular were extremely supportive of my career growth and were champions for me at a young age. As a result, I have enjoyed rapid growth in my career and a chance to expand my skill set and knowledge base very quickly. These opportunities have helped fuel my success within my firm as well opened up opportunities for me to learn new skills on various project types.

Although finding a mentor is not always a clear or defined process, there are things a young architect can do to help facilitate finding one. I have found that the more interest, initiative, drive, and enthusiasm you show in your career, the more likely you are to attract the attention of a mentor who can support you along the way. Look for others that you respect or have an interest in, and do not be afraid to reach out to them and find out more about their career path.



Nordstrom, Topanga Mall, Canoga Park, California. Architect: Callison. PHOTOGRAPHER: CAROLYN G. JONES, AIA.

#### To Lead, To Serve

# CATHERINE A. MCNEEL FLORREICH, ASSOCIATE AIA

Architectural Intern Eley Guild Hardy Architects PA Jackson, Mississippi

#### Why and how did you become an architect?

My father is an architect who has his own practice. I grew up around the business and was exposed to art and other cultural events, travel, and museums. The professional organizations around our state are relatively small and family-oriented so I also got to know other architects and their families through conventions, beaux-arts balls, and the like.

I knew that I wanted a design degree but considered becoming a fashion designer, a graphic designer, or an industrial/product designer. When I was researching colleges and career options, I realized that I was really looking for an education that allowed flexibility and various means of studying a problem. I decided to attend architecture school but was not sure if I wanted to enter traditional practice. However, I felt confident that I could use my broad-based education in a number of professional settings.

# Why and how did you decide on which school to attend for your architecture degree? What degree(s) do you possess?

• Once I decided to pursue an architecture degree, I researched several universities in the southeastern United States. I looked at architecture programs that were accredited by the National Architecture Accrediting Board (NAAB) and considered both the five-year degree programs and 4+2 degree programs. I decided to attend Mississippi State

University, which offers a five-year bachelor of architecture degree. Mississippi State is tied closely to the profession, encourages collaboration between multiple design disciplines, and continuously develops new technology resources. Community service is also encouraged within the School, and this effort has been magnified to respond to ongoing Hurricane Katrina recovery efforts in our state.

### What has been your greatest challenge as an intern thus far?

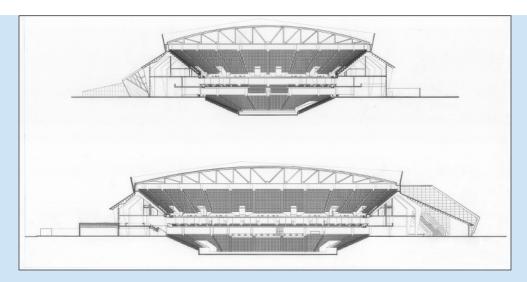
Done of my greatest challenges as an intern thus far has been finding my own voice in the profession. I have struggled to find a successful balance of responsibility, accountability, authority, and mentorship within the context of project teams. Sometimes it is hard to overcome the barriers in getting your opinion out of your mouth and into the project.

### What are your primary responsibilities and duties?

> My role and responsibilities include but are not limited to conceptual design, construction docu-



Stephen Covey Conference and Retreat Center, Gulfport, Mississippi. Architect: Eley Guild Hardy Architects PA. PHOTOGRAPHER: RICHARD SEXTON.



The Entergy Center City of Jackson by Catherine A. McNeel at Mississippi State University.

ment production and management, and consultant coordination and management. Our firm is switching to building information model (BIM) technology, and I am assisting other users with this implementation. The firm is completing many commissions dealing with Hurricane Katrina Recovery efforts on the Mississippi Gulf Coast.

# Throughout your career, you have been involved with both the AIAS and the AIA. How have these experiences contributed to your career?

The AIAS and the AIA have played a huge role in my professional development. I became involved with my local AIAS chapter, serving as secretary, chapter president, and Freedom by Design chair.

I attended the AIAS FORUM during school and really enjoyed the national efforts and voice provided by the AIAS. I decided to run for national vice president and was elected at the 2005 FORUM in Cincinnati. I lived in Washington, DC, as the 2006–2007 AIAS national vice president. The vice president serves on many committees and has the opportunity to visit each collateral organization

office and learn more about the governance of the overall profession. The knowledge gained and relationships formed have created many more opportunities to serve the profession.

After my wonderful year in Washington, DC, I moved to Jackson, Mississippi, and was elected to serve as the 2008–2009 AIA Gulf States regional associates director (RAD). I was also elected to serve as the National Associates Committee's (NAC) 2008 advocacy director.

My firm has been extremely supportive of my involvement in professional organizations. I believe that firm-wide support is critical to one's ability to effectively serve in leadership positions.

Being involved in the AIA is extremely rewarding. I am working with fellow AIA associate members and interns to lead the future of our profession and engage in dialogue about initiatives that affect emerging professionals. I feel more a part of the profession through my involvement at the national level, and I feel that I have a greater understanding of the way the profession works and the challenges it faces.

I encourage more people to become involved, at either the local or the national level. There are opportunities for you, no matter what your interest or background. I have always found that I receive much more than I provide. Our profession is continuously changing and it is important to be a part of that change, instead of watching from the sidelines.

### What are your 5-year and 10-year goals relative to architecture?

My immediate goal is to complete IDP and become a LEED Accredited Professional; also, I wish to become a licensed architect. I plan to complete the ARE by early 2010. I hope to find new ways to learn and broaden my professional experience and capabilities. Looking ahead 10 years, I would like to own a practice or be a managing partner in an existing firm. And I would like to serve as the president of AIA Mississippi and as the AIA Gulf States regional director.



# What is the most/least satisfying part of your career as an architect?

The most satisfying part is . . . making an impact on the community and bringing the vision of a collaborative team to life. Under the best circumstances, architects are hired for their vision and abilities to lead a team towards a shared goal. Being trusted with such lofty expectations is incredibly humbling and rewarding.

The least satisfying part is . . . dealing with the more mundane aspects of the project delivery method: conflicting regulatory authorities, redlines, poor communication and documentation of decisions, and lack of responsibility.

# Who or what experience has been a major influence on your career?

My parents have been the most influential presence in my life and my career. I was always told that I could be whatever I wanted to be and do whatever I wanted to do. I would say that I am a good combination of both of my parents: my father is strong willed and a leader. . . . My mother dedicates a lot of her time to being involved in the community; she is compassionate, giving, and strong. These traits have made me into the person I am today.

My husband, Ryan, has also been an incredible part of my career development. We met in architecture school and found the support system to be undeniably strong. Although we now work for competing firms, we compare our experiences and give advice. It is great to have a husband who truly understands where I am coming from and what I am faced with on a daily basis. He has been my support through all of the challenges and personal growth of internship.

St. Martin High School, Ocean Springs, Mississippi.
Architect: Eley Guild Hardy Architects PA. RENDERING: ELEY
GUILD HARDY ARCHITECTS PA.

#### Teaching Architect

#### MAX UNDERWOOD, AIA

**Professor of Architecture** 

School of Architecture and Landscape Architecture

Herberger Institute for Design and the Arts Arizona State University

Tempe, Arizona

#### Why and how did you become an architect?

Decause my father was involved in construction as a high-voltage electrician, I grew up within the building industry and became an architect primarily by osmosis. Some of my fondest childhood memories are of accompanying my father to his construction sites at Disneyland, Kaiser Steel, MGM Studios, and the Huntington Library Gardens.

In addition, I spent many hours of my youth working with my hands, building custom furniture and rebuilding my 1955 Oldsmobile, in our well-equipped shop in the family garage. In high school, I excelled in chemistry and physics. Because of my love of conceptual thinking and open-ended discovery, and of art and drafting, I worked summers for several local architects and contractors.

# Why and how did you decide on which school to attend for your architecture degree? What degree(s) do you possess?

During my senior year of high school I was recruited in physics at Caltech and University of Southern California (USC). After attending their respective university-wide open houses, I decided to enroll in a dual physics and architecture major at USC.

In the mid-1970s, the architecture program at USC had a wonderful mix of European and Southern

California professionals who had commissions throughout Los Angeles. In addition, the larger university offered exciting classes in film, urban geography, computer science, and, of course, physics, taught by some of the leading physicists of the NASA Jet Propulsion Lab in Pasadena.

The larger architectural and physics cultures of Los Angeles were exhilarating at the time with Aldo Rossi visiting at UCLA, the newly formed energy of SCI-ARC and Richard Feynman lecturing at Caltech. During my junior year of the bachelor of science in architecture program, I worked in the office of Charles and Ray Eames, a truly life-altering and formative experience of my subsequent career as both an architect and educator.

I attended Princeton University and received my master of architecture degree, within a small intimate program, situated close enough to New York, so you could be part of its vital energy and still get your work done.

# What are your primary responsibilities and duties as a "teaching architect," an architect and a faculty member?

True education is not only imparting a body of professional knowledge but to question and advance it through a collaborative investigation of the discipline of architecture by both the student and teacher, whether in school or in a professional office.

Education is a forum where the distinctions between teacher and student have been replaced with the notion of collective inquiry and discourse. The condition is not one of students in competition with one another, but where everyone is discovering something that was unfamiliar a moment before, until this new situation arose,



Spaces of Silence, Kyoto, Japan. Architect: Soami. PHOTOGRAPHER: MARC MONTY.

and where all are willing to help each other clarify their ideas, methods, and work.

Education begins with a response to each student's individuality and talent. The student and teacher must first jointly find out where the individual is relative to their own personal growth, and then establish how to further develop the student's selfdiscipline, motivation, expertise, and individuality. Education, like design, is an act of faith and discipline, where the limits are not clearly defined and the student must discover, define, and act on them. The outstanding students are constantly reaching beyond themselves to develop new ideas, cherishing the difficulties of work that asks hard questions, and forcing themselves to experience the world differently and to change. The pleasure of teaching comes from the firsthand participation in an individual's discovery of the previously unrealized power of their innate abilities in the formation of their own ideas, investigations, and self-criticism.

Next, education should focus upon the development of each individual's processes of inquiry,

invention, and making, grounded by an emphasis on making connections between cross-cultural references, other disciplines, and architecture. Therein lies a concern to integrate interdisciplinary knowledge and critical inquiry from the arts, humanities, and sciences alike, but in ways that suit the problems and purposes of the present.

Students should develop a personal attitude and vision in their inquiry of architecture, test it, and realize it through their critically made work. They must be encouraged to doubt, question givens, and generate acute alternatives to what architecture is today. Familiarity with that evolving body of knowledge we call *tradition* and its progression of ideas, helps students obtain a critical breadth of personal vision and understand why certain questions being explored by other disciplines are essential to their evolving body of work. Students must develop representational media and notational devices that capture the spirit of their design inquiry, and allow them to clearly visualize, refine, and communicate its qualities to other people. They must remember that the most

challenging professional and intellectual problems of contemporary architecture require integrating the knowledge of several disciplines into broader understanding, insight, and action.

# Who or what experiences have been major influences on your career?

Working for the office of Charles and Ray
Eames in the mid-1970s was one of the most profound and life-altering experiences of my career.
Their office allowed me to experience firsthand
exemplary professional practice and what hap-

pens if you "make design your life, and life your design." It was a rich and provocative environment for celebrating the inquiry of the unknown. Everyone in the office became personally engaged in thinking deeply and differently, going beyond the point where others had stopped, satisfied. I saw endless speculation, prototyping, and when a promising revelation was arrived at, celebrating its beauty through film so anyone, even a child, could share in the enjoyment of the discovery. Charles would always ask you one question at a desk critique, "What is interesting?"

#### Creator of Space

JOHN W. MYEFSKI, AIA

Principal, Myefski Cook Architects, Inc.

Glencoe, Illinois

#### Why and how did you become an architect?

I wanted to shape the future built environment. I feel that architects have such a profound impact on the way we live that I thought it would be great to create. I also had the chance to work for an architect as a high school senior. This experience really set the stage for my future.

# Why and how did you decide on the University of Michigan to attend for your architecture degree? What degree(s) do you possess?

I grew up in the upper peninsula of Michigan, and the idea of going to a school that was in the Midwest was important because of cost; cost was a strong consideration when selecting the University of Michigan. I was fortunate to have one of the best public schools in my state. I attended the pre-architecture program at Northern Michigan University for my first two years. All of my credits transferred to the University of Michigan. This saved me cash and allowed me to flourish in a small university before graduating from Michigan with my bachelor of science. Because I really enjoyed the architecture program, I stayed to graduate with my master of architecture two years later.

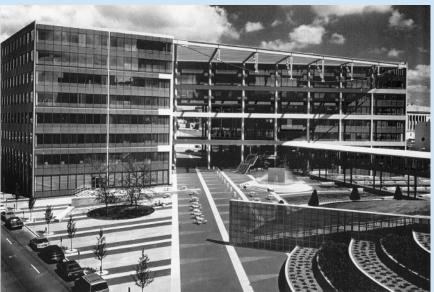
After receiving your master of architecture, you had the opportunity to study abroad in Denmark as the recipient of a Fulbright Fellowship. Please describe this experience and how it shaped your career as an architect.

Decause I received both my degrees from the same school, I felt that my education needed a boost or outside shock to complete my studies as a well-rounded student. My solution was to attend a program in Europe; the Fulbright provided me

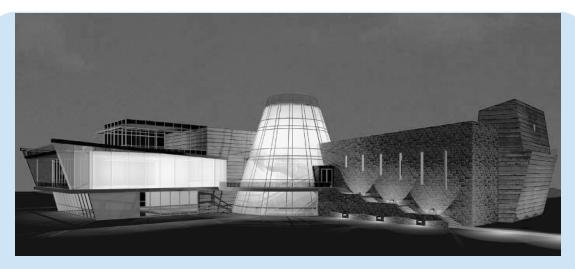


◆ Private Residence, 317 Adams, Glencoe, Illinois. Architect: John W. Myefski, AlA, Myefski Cook Architects, Inc. PHOTOGRAPHER: TONY SOLURI PHOTOGRAPHY.

▼ Principal Mutual Life Insurance Company, Des Moines, Iowa. Architect: John W. Myefski, AIA, Murphy/Jahn.



that opportunity in Copenhagen, Denmark. The Royal Danish Academy was a great chance to study abroad and spend the time traveling throughout Europe. I cannot tell you how this changed my life as an architect and person. The exposure to living in Denmark and what I saw enriched my soul and improved my work. Travel is the most important part of your education!



Wakefield Memorial Building, Wakefield, Michigan. Architect: John W. Myefski, Myefski Cook Architects, Inc. PHOTOGRAPHER: MYEFSKI COOK ARCHITECTS.

### What has been your greatest challenge as an architect?

Waiting to peak! Being in my mid-forties, I am just getting started on where I want to go with my work. It takes time to build a practice and even more time if you want your work to be substantial and not a momentary flash in a magazine. When you start your practice you need to succeed in many ways and it is basically like building a home. First you start with a solid foundation and then keep working your way up. At this point I feel that I am starting on the second floor—cannot wait to get to the roof! I think most architects really getting going at age 55–60 so I have plenty of time to improve.

# What are your primary responsibilities and duties as the principal of your own firm?

Everything! In a practice of 15 architects with two principals you really do everything. That is the best part. I find the work, do the design, oversee the building of the project, maintain contact with the client, fix just about any problem that exists, and run the day to day of a business. Most people do not understand that it is the architect's job to solve problems. Life is a series of logjams, and I am constantly trying to keep the water flowing.

#### Why did you decide to open your own firm?

I had been working for Helmut Jahn and loved my job but needed to look to the future and develop my own work. I started the firm because I found a historic home that I was saving by literally moving it to a new site; it went so well that the owners of the home asked me to take over the new home they wanted. This was my first job, and saving the home made me a hero in my small community—the rest is history.

# When designing a project, how do you begin? What is your inspiration?

I pull the pen out and sketch on whatever I can find. The ideas are created from inside but they are influenced by the program, client, site, locale, history, etc. I love to feel and experience the site and its surrounding context. Buildings do sometimes have a metaphor but mainly it comes from someplace within. I think if you could discover the exact point, you would unlock the future.

# Who or what experience has been a major influence on your career?

My childhood was key and that is because I spent much of it traveling. The exposure opened

my eyes and I have a hard time closing them to this day. My education was a strong second and that is because I had great professors and a wonderful facility to explore at the University of Michigan. It is simple; you need pen and paper; the rest comes from your exposure and professors. My first position at Murphy/Jahn was the best and gave me the chance to work on wonderful projects.

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