

colonnade

The Practical Imagination:
Design Thinking and
the Other 50%

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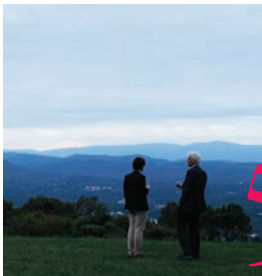
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Crowdsourcing *Colonnade*

For this year's *Colonnade* magazine, the School sent a questionnaire to 45 alumni with a wide range of careers, backgrounds, degrees, and experiences — asking them how they go about solving problems, which faculty member inspired them to think creatively, and how their design thinking education from the School of Architecture has helped them succeed in their current jobs and everyday life. We extended a similar survey to the A-School community in an email sent in February 2014. Everyone was asked to submit three words, which you will find throughout this issue:

Describe yourself with an adjective

Describe your work with a verb

Describe your A-School experience/education in a word

Thanks to all the participants — alumni, faculty, students, staff, family, and friends — for sharing your memories, updates, advice, and hopes for the future of the A-School.

50%

An Introduction to the Other 50%

Kim Tanzer FAIA, DPACSA
Dean and Edward E. Elson Professor of Architecture



Images: In-progress drawings (left) and selected drawings (pages 5 and 7) from Dean Kim Tanzer's Practical Imagination course, taught at the School of Architecture in spring 2014. Students completed these drawings during each class session on large sheets of paper as part of a continuous visual dialogue on design thinking. Students: Anne Donnelly, Col '14, Katie Gronsky, MUEP '15, Stephen Grotz, BSArch '16, Josh Hadley-Goggin, BSArch '16, Frankie Krawczel, BUEP '14, Ben Turner, Eng '14, and Peiwei Zhang, BSArch '14.

When I began meeting graduates of the A-School five years ago, it quickly became apparent that we have an extraordinarily accomplished, committed, and connected alumni base. It also became clear that not all of our alumni's careers are linear extensions of their academic training. This is not surprising — over our lifetimes, our interests change and the economy challenges us to move in different directions. More importantly, however, as this *Colonnade* issue seeks to make clear, an A-School education is excellent preparation for many pursuits beyond traditional design and planning professions.

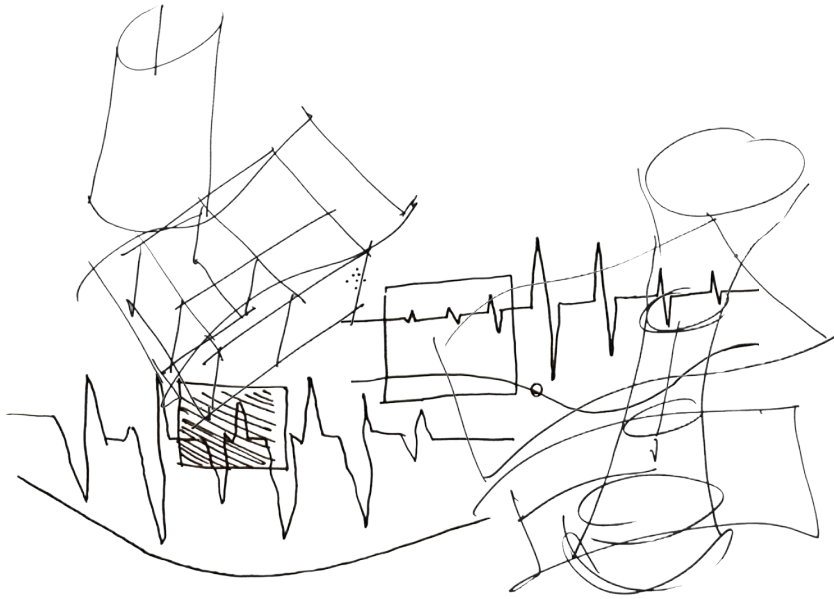
The fact that design education leads to many careers is not unique to our time or to the University of Virginia. A commonly cited national statistic indicates that 50% of the people who graduate from architecture schools do not go into professional practice. As dean, I quickly began referring to this cohort as “the other 50%,” to formally recognize these alumni's choices and celebrate their equally admirable successes on behalf of the A-School.

Design Is the New Black

Several years before I came to U.Va., I served as president of the Association of Collegiate Schools of Architecture (ACSA), where I helped champion the importance of design thinking and advocated that schools of architecture should take a leadership role in this important national dialogue. I made this case in my February 2008 ACSA President's Column, excerpted below:

Design is the foundation of our method of inquiry — we must understand it better, improve it, and disseminate it effectively to our students, within the academy, and throughout society. . . . I have seen many circumstances align to position our discipline well within our universities and to society. . . .

In short, science, engineering, business, fine arts, and the popular media have recently, and very publicly, embraced design. How is the discipline of architecture participating in this cognitive realignment?



Most of us would agree that design is the center of our schools' cultures, and that we have been teaching and practicing design, as currently understood, for decades if not centuries. But, speaking for a moment of individual institutions, is yours promoting your expertise to colleagues across campus and within your community? Does this larger community know what you do? Do they solicit your help to design your campus, to learn how to teach studios, or to participate in grants? . . .

When I started architecture school, there were discussions of the "black box," referring to the computer and to the fact that we understood its input and its output, but not how it processed information. The black box served as a visual metaphor for the magical but invisible process of turning information into zeros and ones and returning them in a different form.

Looking back, and recalling that this was the waning of the first phase of design methods research, I wonder if the black box wasn't a form of collective projection. Did we know then, or do we know now, how design works? . . .

Since the first wave of design research, other disciplines have developed tools that might prove helpful to us. . . .

We will need to understand the mechanics of design thinking well, and communicate them clearly, to capitalize on the fortuitous position in which we find ourselves. . . .

I suggest that if members of our discipline remain content to enjoy this powerful mode of action individually, and to share it only with our disciplinary peers, we will miss a once in a lifetime opportunity to place architecture and design at the center of society's concerns.

A Jeffersonian "Riff" on Design Thinking: Toward a Curriculum in the Practical Imagination

Combining my own passion and sense of urgency for promoting design thinking with the evidence of its effectiveness in so many A-School alumni, I set about shaping a proposal that would resonate with the larger U.Va. community. As is so often the case, Mr. Jefferson's legacy pointed the way. During a visit to Monticello, I saw a comparison between the way Francis Bacon and Thomas Jefferson organized knowledge. Their tripartite divisions became the basis for my argument, which I presented to the University leadership and the A-School community in a 2010 white paper. Quoting directly from that paper:

Francis Bacon, the 17th-century philosopher, divided knowledge into three parts: Memory, Reason, and Imagination. Thomas Jefferson, following Mr. Bacon's work, divided his own library into three sections, which he titled History, Philosophy, and Fine Arts. . . . Mr. Jefferson's library formed the foundation for the Library of Congress.

Due to the persuasive power of Mr. Bacon's work, and that of his contemporary René Descartes, much of the intellectual effort of the last three hundred years has been devoted to the pursuit of reason . . . focused on determining the cause of that which exists.

Left to atrophy in this quest for certainty has been the important role of imagination — that which might exist. . . . Indeed, the fine arts, including architecture and oratory along with theater, painting, dance, and music, too often have been characterized as the self-expression of individual geniuses, only appreciated by connoisseurs. This proposal seeks to resuscitate the important third branch of Mr. Bacon’s and Mr. Jefferson’s organization of the world’s knowledge, through the creation of a curriculum in practical imagination.

Imagination can be generally defined as (1) the act or power of forming a mental image of something not present to the senses or never before wholly perceived in reality, (2) creative ability, the ability to confront and deal with a problem, the thinking or active mind, or (3) a creation of the mind or a fanciful or empty assumption (www.merriam-webster.com). In current times, imagination is too often aligned with the third definition. . . . But the first definition, suggesting the ability to envision the future, or to make connections between unlikely things, holds underexplored promise. It is this use of the term imagination that suggests new avenues for interdisciplinary teaching and research at the University of Virginia.

The phrase “practical imagination” is a catachresis, or purposefully mixed metaphor. . . . While imagination is often viewed as impractical, the practical is too often unimaginative. The [proposed] Curriculum in Practical Imagination seeks to celebrate this paradox and, in so doing, find a way to move past the regrettable dichotomy that often splits art from science, leaving both impoverished.

The Creative Process

Everyone reading this issue of *Colonnade* is well acquainted with the design process. Most of you cycled through it many times while in the A-School and now use it regularly, regardless of what you do. Nevertheless, we are reminded by thinkers such as Michael Polanyi that we often “know more than we can say,” an idea Donald Schön characterized as “tacit knowledge” in his book, *The Reflective Practitioner*. Therefore, allow me to summarize some key features of the design process.

Phases of the Creative Process

Scholars and educators typically identify five overlapping processes that contribute to creative thinking: (1) preparation or immersion; (2) incubation, when ideas “churn” beneath the threshold of consciousness; (3) insight, when a new solution emerges, often

fully formed, while doing something unrelated; (4) evaluation, when we rigorously consider what has emerged; and (5) elaboration, when we more fully develop the project. These phases should sound much like a typical design studio, but they equally describe the process of writing a paper, proposing a project, or creating a public event. As the literature exhaustively reiterates, these phases are nonlinear and often overlapping. Collectively, these phases provide a snapshot of the complicated process of imagining something new.

Domains and Matrices

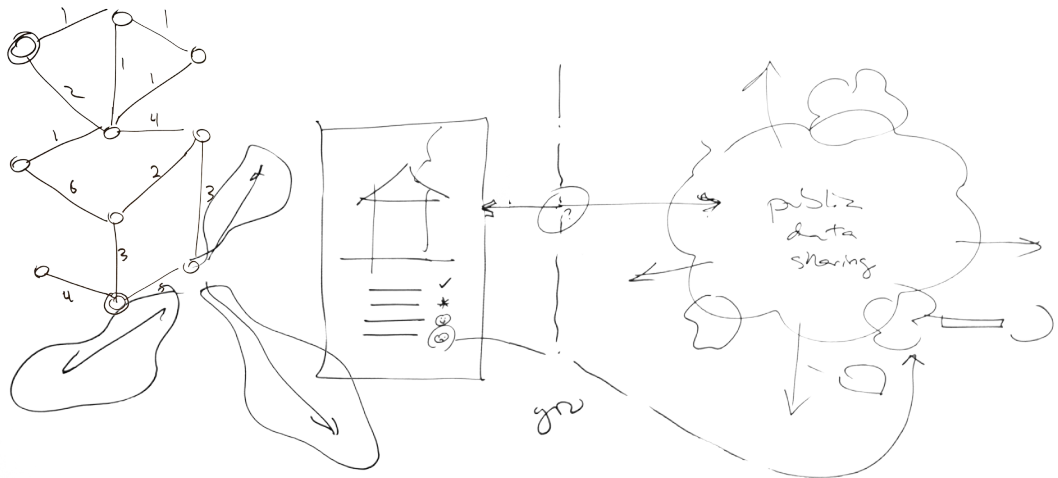
Context is vital to creative production. Creativity does not happen in a vacuum. Arthur Koestler describes the importance of a “matrix,” which he defines as “any ability, habit, skill, pattern of ordered behavior governed by a ‘code’ of fixed rules.”ⁱ A matrix, he argues, allows creators to understand the limits of the known and provides a pattern from which innovation can deviate.

Mihaly Csikszentmihalyi uses the term “domain” to characterize a similar shared understanding of symbolic rules. Those who extend or overturn the rules of a domain are that field’s most creative members.

In this issue of *Colonnade*, we have used the term “domain” to describe broad professional or disciplinary areas to which faculty, students, and alumni contribute. These include the traditionally defined design disciplines as well as other areas. We contend that design thinking, or practical imagination, allows our community to see patterns and opportunities related to, but not coincident with, architecture, landscape architecture, architectural history, and urban and environmental planning. To focus on “the other 50%,” we identified five domains beyond those explicitly taught in the A-School: (1) arts, culture, and design, (2) business and entrepreneurship, (3) communications and media, (4) civic duty and saving the world, and (5) environmental design (broadly defined).

The Aha Moment

Nineteenth-century philosopher Charles Peirce, while outlining the contours of “abductive thinking,” described the magical moment when two thought matrices collide: “But suddenly, while we are poring over our digest of the facts and are endeavoring to set them into order, it occurs to us that if we were to assume something to be true that we do not know to be true, these facts would arrange themselves luminously. That is abduction.”ⁱⁱ This pivotal moment in the creative process will be familiar to everyone reading *Colonnade*. It is an experience we work hard to ensure all of our students have, and is employed to great effect by our alumni in their personal and professional lives.



Steps Toward the New Curriculum

In the past few years, we have formalized coursework in design thinking in several ways. First, with the help of George Sampson, who teaches a robust series of courses in arts administration at U.Va., we created a new course, Introduction to Design Thinking. This class (taught by Sampson) has now been offered multiple times. Secondly, in 2012 the Department of Architecture proposed a new undergraduate concentration in design thinking. With the help of a newly appointed director, Anselmo Canfora, this new undergraduate track has enrolled its first students and offered its first studio. Meanwhile, I taught Introduction to the Practical Imagination this spring and previously taught, with Warren Buford, Design Entrepreneurship.

Rounding out the School's recent efforts, as you read in last year's *Colonnade*, we cohosted (with Jody Kielbasa, vice provost for the arts at U.Va.) an interdisciplinary symposium titled *After the Deluge: Reimagining Leonardo's Legacy* in the spring of 2013. We followed that with this spring's *Intention and Improvisation: Four Provocations*, organized by Ghazal Abbasy-Asbagh, Cammy Brothers, Jeana Ripple, and me. Both symposia included faculty members from across Grounds.

This *Colonnade* issue presents much of the above-mentioned work in more detail, and helps you see the impact the A-School's longstanding design curriculum has had on our alumni.

The Need for Practical Imagination

I ended my 2010 proposal to University leaders with this observation: "Author Tom Friedman, in *The World Is Flat*, suggests that Americans' impact on the coming century will be defined largely by our ability to create new opportunities through innovation — new goods and services, new business models, new ways of being. At its most basic level, this is the goal being pursued by many research universities, including the University of Virginia, as they develop hubs for innovation and technology transfer."

At the School of Architecture, and across the University of Virginia, we are constantly creating new knowledge, and designing ways to imagine and invent a better world. May this issue of *Colonnade* help us lead the way.

For further reading:

1. Tim Brown, with Barry Katz, *Change by Design: How Design Thinking Transforms Organizations and Inspires Innovation* (New York: HarperCollins, 2009).
2. Mihaly Csikszentmihalyi, *Creativity: Flow and the Psychology of Discovery and Invention* (New York: HarperCollins, 1986).
3. Arthur Koestler, *The Act of Creation* (New York: Macmillan, 1964).
4. Michael Polanyi, *The Tacit Dimension* (Garden City, NY: Doubleday, 1966).
5. Donald A. Schön, *The Reflective Practitioner: How Professionals Think in Action* (New York: Basic Books, 1983).
6. Twyla Tharp, with Mark Reiter, *The Creative Habit: Learn It and Use It for Life; a Practical Guide* (New York: Simon & Schuster, 2003).

¹Koestler, *The Act of Creation* (New York: Macmillan, 1964), 38.

²Charles Sanders Peirce, Harvard Lectures on Pragmatism: A Deleted Passage (1903), quoted in Thomas Fisher, *The Abduction of Architecture* (Minneapolis: University of Minnesota Press, forthcoming).