

ENR Viewpoint

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The Built Environment Is About to Matter More Than Ever

By Louis Bieker AIA, LEED AP

We're at a watershed moment in American cultural life. Libraries and books are losing ground to iPads and Twitter feeds. Great newspaper empires are being reduced to rubble at the feet of Gen-Y bloggers. In other words, matter is giving way to energy. And nowhere is this shift more evident than in our colleges and universities, with the rise of online education and MOOCs (massive open online courses). Architects, engineers and contractors should sit up and take notice, and start making a stronger case for bricks and mortar in an increasingly virtual world.

Why would a parent want to spend \$50k a year to ship their kid off to a four-year college in some city, to a room in a building somewhere to talk to a professor and read a book, when they could get a degree from an online university for a fraction of the cost and never leave the house?

One answer can be found in the basic human need for real relationships. We're compelled to seek out physical spaces that nurture and enliven us, where we can reach out and connect with other people. But with the virtualization of education, this is all at risk. And parents are at risk, too: because when that student finishes his degree online, having spent four years in a twilight state in his parents' basement, he might take a series of Skype meetings with far-flung potential employers, secure a desk job, and decide to stay home indefinitely.

Granted, the ivy-covered edifice of higher education is eroding and in need of an extreme makeover: we now need to engineer environments and curricula that are less prescriptive and more interactive; less sequestered and more transparent; less monistic and more plural.

An Antifragile Future

In a post-Katrina, post-Sandy world, a lot has been made of antifragility¹—the notion that some things when confronted by volatility don't collapse, they adapt and evolve, actually getting better as a result of negative inputs. Engineers especially are reimagining our infrastructure to make it less susceptible to catastrophic weather—to be anti-fragile.

When the bottom fell out of the economy in '08, a lot of firms learned very quickly that in order to survive, they needed to embrace new ways of working, new typologies, new clientele. They could no longer afford to specialize in one building type or one approach. Unlike the mighty oak that cracks in a storm, they became the bamboo shoot: pliable, responsive, structurally sound but resilient.

The most competitive firms now are looking at new ways to ensure that one space doesn't serve just one function—they're trying to find plurality and mixed use within spaces. In competitions, through RFPs, through word of mouth, we're seeing that owners are demanding that buildings and their designers be less like a book and more like a tablet computer—capable of doing many things, not just one. Perhaps there's a reason we A/E/C folk are moving toward antifragility: It's in keeping with that transition from matter to energy. Matter is essentially already spoken for... it's a particular thing with a limited range of uses. But energy can take on myriad forms and functions—it's not too narrowly defined.

When we work with higher education clients, particularly in town-and-gown projects like ONE Greenville in South Carolina (an urban-infill development where Clemson's new Graduate School of Business is housed), the first question is, how can we create the conditions for students to have meaningful interactions with the real world, and vice-versa? We want them to have the opportunity for chance encounters; to bump into attorneys and investment

¹ [*Antifragile: Things That Gain From Disorder*](#), by Nassim Nicholas Taleb, Random House, November 2012.

bankers and hoteliers and restaurateurs as a daily matter of course—not just in an online forum but on a vegetated rooftop at lunch, maybe. It’s the intersection of civic, commercial and cultural life—green roof as academic quad.

The opportunities here for mentorship, for memory making, for real friendship—in short, for being human—are all predicated on the built environment, and can’t (yet) be duplicated with a computer monitor and a mouse. This is not a Luddite’s lament... we recognize that it’s wildly important to fold the best of the virtual world into the buildout of the physical one. That can mean quickly convertible spaces that scale seamlessly from individuals to small groups to MOOCs, having the ability to interact with and plug directly into technology.

So why is the built environment about to matter more than ever? According to the U.N., the planet is on track to add a billion more people by 2020. The essential question is, where are these humans going to live and work, learn and play? Well, *somewhere*. And if foresight is 20/20, that somewhere will have to be built on something more substantial than pixels and terabytes.

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Pull-quotes:

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