**FALL 2009** 

# MAKING INNOVATION IS ART BEING OVERLOOKED?

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weapons of mass instruction

reintegrating art and science

math, science and test scores rule.

between art and science

in both art and science, design and engineering, painting and poetry.

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In considering the neuro-evolutionary ramifications of creativity,

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#### Huy Vu + Mary Banas pages **7-20**

Fresh out of grad school, **Huy Vu** MFA '09 GD and Mary Banas MFA '09 GD chose to work together to design the feature articles in this issue. Huy is familiar with the art/science connection; before coming to RISD, he earned a BA in Biology from Carleton College and then went on to work as a janitor. a dance music publicist and a web producer for Listen Up!

Mary earned her BFA at UCONN and now lives in Connecticut again, where she is happiest when pursuing her favorite things, which include: badminton, public libraries, stickers, swimming in the ocean, and, apparently, the USPS. For more on her work, go to www. marvbanas.com. Huv is now living and working in his hometown of New York City. His site is: www.weeboo.org.

#### **Raiive Anand** pages 16-17

A second-generation Indian, Rajive Anand '95 PT worked with RISD's Career Services Office to win a Fulbright Fellowship in 1997. The grant enabled him to return to his ancestral homeland for a year to study traditional Indian painting. Since returning to the US in 1998, Raiive has taught art in a public high school in the Bronx, while continuing to travel and pursue his own artwork in earnest during long summer vacations.

**Darby Roach** pages 18-20

#### Darby Roach MFA '85 GD,

a former assistant professor of art at Penn State University, has also taught in RISD's summer programs. Now the principal of Orbit Direct Creative Marketing in Seattle, he continues to pursue an abiding interest in writing. His new book Your Three-Second Window: Changing Your Everyday Moments into Extraordinary Opportunities for Success is due out in the spring.



## **Considering a big IDEA**

Even before I left MIT to come to RISD, I had a lot of doubts about technology alone holding the keys to a brighter future. No doubt, breakthroughs in science and technology have changed the lives of many in the world. and as a nation we have gotten far on technology's merits. But the faster I saw technology moving, the less I was able to feel its meaning on my own life. I got tired of the latest upgrade, the newest feature.

Now, when our local and national governments talk about the need for more innovation, they almost inevitably point to one path to get there: increased emphasis on Science, Technology, Engineering and Math, or STEM. In the educational policy world, we hear a lot about the need to better educate today's young people in the STEM subject areas. There are task forces and researchers and lobbvists all lockeving to remind us that without more STEM in our system, America will fall woefully behind. As a lifelong STEM student myself. I am certainly not one to diminish its value. But no one is talking much about some of the other essential ingredients needed to make true innovation.



"As a lifelong STEM student myself, I am certainly not one to diminish its value. But no one is talking much about some of the other essential ingredients needed to make true innovation."

So I have begun to speak out about the importance of what you - our RISD community - bring to the mix. I'm using my own acronym - IDEA - to make the case that STEM alone will not lead to the kind of innovation we need in the 21st century. Instead, I'm talking to people about the need to add Intuition, Design, Emotion, Art to add what you, as artists, designers and creative leaders, do naturally.

At RISD we may know that innovation depends less on the pure pursuit of STEM subjects than on the same critical thinking and problem solving a studio education demands. It requires the open-mindedness and rigorous inquiry, the broad conceptual thinking and ability to see the big picture that we expect of our students.

But even if we know that the flexibility of mind you develop here has great value in the world - well beyond your studio major -I don't think it's that obvious to people in positions to set the national agenda. Most of them are still talking about STEM as the educational antidote for everything from our ailing economy to our uncertain geopolitical status in the world.

That's why wherever I go I speak out about the value of critical thinking and critical making, of IDEA, of RISD. Maybe you'll let me know what you think about STEM and IDEA. Maybe you'll propose other meanings for the acronym IDEA, which have already started to percolate on campus - Inspiration, Inquiry, Integrity, Do, Evolve, Aesthetics, Ask.

Most of all, I hope you will join me in thinking and talking about how artists and designers really can help reframe the biggest questions of our time and open up our collective thinking to allow for innovation that will meet the challenges that lie ahead.

Thank you,

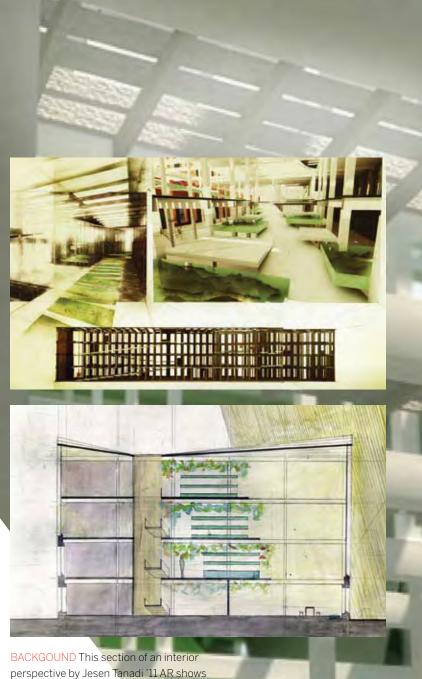
Joon

John Maeda, president

# GROWING UP Vertical Gardening Studio

In the site-specific Architecture studio *Skin Deep*, *Light as Air*, students proposed options for adaptive reuse of an abandoned mill building in a low-income neighborhood in Providence. The Danish skylight company VELUX sponsored the studio to "challenge architects-in-training to think about the role natural lighting plays in their designs." Anastasia Congdon, the Architecture critic who taught it, further defined the focus of the studio on "a new building typology: the vertical farm," an urban option that offers far greater production capacity and longer growing seasons than traditional farming.

Last spring students designed plans and models for adapting the mill into a mixed-use facility that supports vertical farming, and then presented their work to receptive officials at the Rhode Island Department of Health and the Lt. Governor's Office. As part of the project, which will continue with a similar studio this spring, Congdon also asked students to think about "how grassroots organizations can become financially viable, sustain themselves and propagate healthy habits within their local communities." Adding this component to the design brief "forced students to think more deeply and more clearly about the problems they're confronting," notes Brian Goldberg MArch '00, a visiting critic for the studio. "They were destabilized by the complexity of the problem, which has a valid pedagogical function in terms of problem solving and critical thinking."



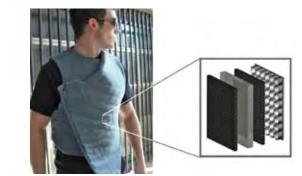
perspective by <u>Jesen Tanadi '11 AR</u> shows a portion of a proposed growing atrium. A sloped surface for gardening towards the rear of the atrium is accessible via a gentle staircase running up it.

TOP These interior perspectives and model represent the solution proposed by <u>Nicole</u> <u>Kim '11 AR</u>, who envisions ramps with raised growing beds inside the mill.

BOTTOM Exploring the idea of correspondence, Ming-Yi Wong '10 AR proposed a design that responds to the changing intensity of daylight throughout the day, along with the changing angle of the sun during different seasons. The floor levels also correspond to each other programmatically, with the first two floors designated for cultivating fish and the upper two floors – with the most light – for the primary gardens. RIGHT In the studio, Albert Lee '10 ID proposed a public eWaste recycling machine that looks a lot like an ATM from the outside. Nanorobotic devices inside the machines use Raman Spectroscopy sensors to identify and sort glass, metal and polymer particles into separate collection bins so that these materials can be reused, turning waste into a resource.

BELOW In the *Horus* police armor system designed by <u>Matthew Kihm '10 ID</u>, a thickening fluid sandwiched between two layers of carbon nanotubeimpregnated Kevlar stops knives and bullets from penetrating the vest.

BOTTOM For people who frequently forget whether or not they have locked their doors, Joo Young Lim '10 ID proposed a new type of key. It relies on a mechanochromic smart material that changes color once it has been used to lock a door and reverts to its original color once it unlocks the door.







# EXPLORING NANO DESIGN Future Studio

In *Future Studio*, an Industrial Design class taught by Associate Professor Peter Yeadon, students propose designs that make use of the mind-boggling possibilities of nanotechnology – loosely defined as the development of miniscule materials and devices that are manipulated at atomic and molecular levels. It's a field expected to take off globally within the next decade and to transform our lives well beyond what we've seen with the web and wireless.

To help introduce students to the nano-world – things like "coatings that clean themselves, materials that shed or absorb water, change shape or color, or generate power" – Yeadon gives a historic overview of the relatively new field and brings the class to Brown's Institute for Molecular and Nanoscale Innovation (INNI) to learn about the latest research. It's the best way to help students imagine uses for nanotech beyond biomedical and military applications – "you know, saving and killing people," he says. "As designers, we seriously need to consider other appropriate ways to use these incredible technologies." 11

#### risd views

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# risd by design

alumni, reunion + parents' weekend

Hundreds of alumni and parents gathered at RISD on October 9 and 10 for an exhilarating series of panel discussions, hands-on workshops, reunion gatherings and informal exchanges. From the popular outdoor art sale to strange encounters in the Nature Lab, RISD by Design '09 proved to be a weekend worth remembering.

save the date for next year: October 8 – 9, 2010 for more information as the weekend approaches, go to:

# rbd.risd.edu