INNOVATION

Norman Foster and the Hearst Corporation complete an 80-year-old vision

The art and science of making new materials
Entering design's machine age
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On the Cover: Every steel member in the Hearst diagrid system was modeled in three dimensions to make coordination more efficient. Illustration courtesy Mountain Enterprises.

Above (clockwise from top left): The Hearst Tower in New York, photograph by Foster and Partners; The Cornel West Pavilion in Princeton, New Jersey, photograph by John Nastasi; BI. Special, a material designed by Steven Holl Architects, photograph by Steven Holl; “She Changes,” a sculpture by Janet Echelman, photograph by Florence Lynch Gallery.
Swooping II, Caja de Burgos, Spain, 2001

Janet Echelman stands beneath one of her works in the 15th-century courtyard of Casa de Cordon.
Matching artistic vision with technical innovation, Janet Echelman offers new ideas for public art.

Catching Air

By Diana Lind

Janet Echelman's interdisciplinary art invites contradiction. Her body of work includes sculptural nets that dance whimsically in the air but whose choreography is the result of intense research and tedious calculations. Her projects, often large pieces of public art, have personal, human-scale titles such as She Changes or Wide Hips. Even her pedigree is not straightforward: Based in Boston and New York, she has a master's of fine arts from Bard College and has been duly awarded with prizes and fellowships, but she can also count a master's in psychology and two years as a concert pianist with the Florida Orchestra among her achievements.

But it's precisely this crosscurrent of education and influences that makes Echelman's art interesting. She first began using nets as a medium while in India on a Fulbright senior lectureship in 1997. She had planned to paint, but when the brushes and paints she'd sent separately never arrived, she took advantage of living in a seaside village. Walking along the shore at night, she noticed the fishing nets the area's fishermen rolled up at the end of the day. Soft but strong, the nets could be shaped but were easily transported—and thus a sculptural medium was born.

True to form, Echelman doesn't want to be perceived as limited to one type of project. In an interview with Record (see page 14), she was quick to assert that her repertoire extends beyond nets. "Collaborating with a site," she adds, is a central part of her approach to each project, as are the "animating forces" of wind and water.

In addition, she often has a range of collaborators: architects, engineers, and lighting designers. For a new project, she would like to explore the realm where art and architecture collide: "I would like to work with an architect where we collaborate to make a seamless transition between a solid structure and a fluid sculptural membrane—to where the boundary between the building and the wind sculpture is blurred entirely." If her past work is any indication, this collaboration will be anything but the expected.

Eye of the Storm, Cambridge, Mass., 1999
A sculpture made of knitted stainless steel is suspended between buildings on Harvard's campus.
She Changes, Porto, Portugal, 2005

Echelman's most recent work measures 164 feet high by 492 feet square and alludes to nearby smokestacks, fishing nets, and Portuguese lace.
Target swooping down...bullseye!

Madrid, Spain, 2001

Located in an office building, the hand-knotted nylon lace net can be seen from every floor.

South India Project,
Coimbatore, India, 1998

For this project, which includes brick, Echelman collaborated with Hindu temple masons.
Roadside Shrine I: Cone Ridge, Houston, 2000
The sculpture was temporarily affixed to the underside of the interstate.

Bellbottoms Series, India, 1998
The series of temporary structures was created from bronze, silk, cotton, and steel; it also formed a traveling exhibition.
An artist’s mind at work

Architectural Record: What attracted you to working on large-scale art and having your work in the public domain?
Janet Echelman: Scale turns out to be central to my context. It’s not that bigger is better, it’s that my work is about creating an experiential interaction with the viewer. And because of that, [the art is] partly about letting us humans feel small in relation to a sculptural experience.

AR: How were you introduced to Tenara [the main material used in She Changes]?
JE: Once I had been hired for the commission in Portugal, I went in search of a material that would last in the elements, that would be colorfast, and that would not degrade when exposed to ultraviolet light. I wanted an adaptable, flexible material, because that’s what my work is about—strength through adaptation, or strength through responsiveness. The manufacturer of Tenara, W.L. Gore, has been collaborating with me with custom colors, which are extruded into the fiber. I’ve been very pleased with how it’s working.

AR: How much of your creative process do you devote to research—say, doing modeling with computers or prototypes—and how much do you leave to chance?
JE: Well, I try to leave nothing to chance, especially at this scale. We model and we find as many ways to double check as possible. For She Changes, we even created some proprietary computer software to model the net with its weight and shape in different wind directions and velocities to ensure that the sculpture would maintain its integrity in a hurricane, and also to ensure that we would get the kind of movement, the kind of wind choreography, that we want on an average day. I was hoping for a kind of gentle movement that was more like breathing, because I’m trying to make the nets almost like living, breathing structures.

AR: How do you feel your collaborators change or influence your approach to your work?
JE: In Portugal, the architect Eduardo Souto de Moura worked with me to design the ground plane that interacts with the piece. The concept was mine but he brought a lot to that process, including the lighting design. I think the outcome was better because of our collaboration. I knew I wanted to put a team together for the 9/11 memorial in Hoboken, New Jersey, and working with such talented collaborators—in this case, Studio Gang—has really enriched the work. And engineers are as critical to me as they are to architects in terms of telling me what’s possible. On a personal level, it’s a lot more interesting to work with a team of smart people who bring different knowledge to a project.

AR: What projects are you working on now?
JE: I am working on a project for the city of Scottsdale, Arizona. They determined that they want landmark public art as opposed to many small pieces of integrated public sculpture.

At the same time we’re working very actively now on the 9/11 memorial in Hoboken. I just participated in an event on the fourth anniversary of 9/11, in which we began gathering narratives from members of the community. I’m gathering them in handwriting because I want the actual personal qualities to become part of the memorial.