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A PUBLICATION OF BALCONY MEDIA, INC.



U.S. \$5.95 / CANADA \$7.95

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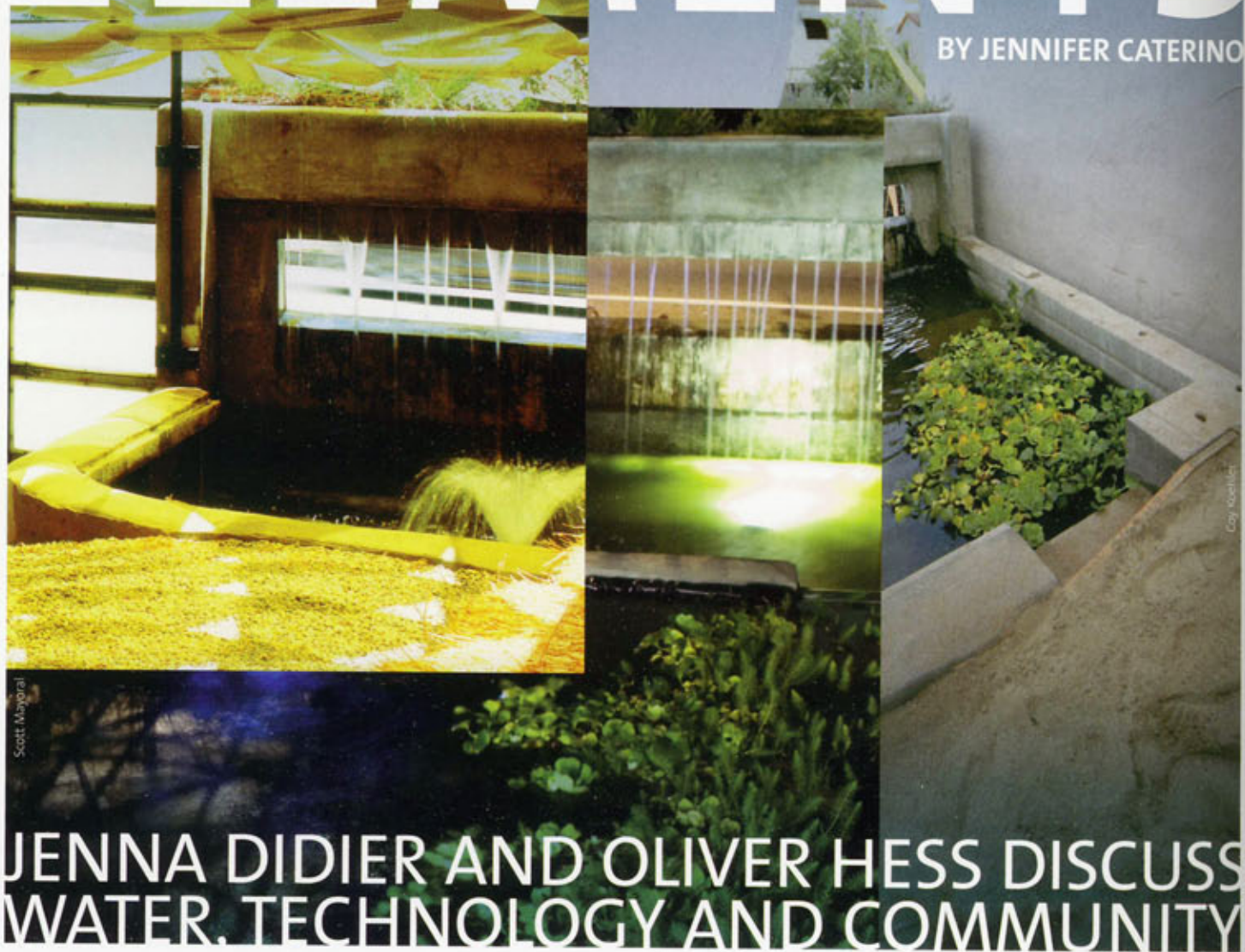


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# ESSENTIAL ELEMENTS

BY JENNIFER CATERINO



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All images courtesy of Fountainhead, except where noted.

JENNA DIDIER AND OLIVER HESS DISCUSS  
WATER, TECHNOLOGY AND COMMUNITY



By now, the buzz around last year's shimmering Mylar exhibit near Los Angeles' Silver Lake Reservoir has secured a place for the Materials & Applications Architectural and Landscape Research (M&A) space in our collective consciousness. In operation since 2002, M&A has mounted several exhibits and hosted countless workshops and events, exploring ideas ranging from sustenance to origami, though none managed to capture the media's attention like Ball-Nogues Studio's *Maximilian's Schell*. ♦ Likely less familiar is M&A founder and director, Jenna Didier, whose alter egos position her as principal and lead design engineer of Fountainhead, which creates fountains and water features, as well as one-half of the design team known as infranatural. Didier's collaborator in all three entities is technology artist Oliver Hess. Together, Didier and Hess are creating dynamic social spaces, engaging the community in architectural projects, challenging public perceptions about water and sustainability, evolving technology and more. ♦ Jennifer Caterino had the opportunity to sit down with the pair on November 1.

**JENNIFER CATERINO:** I'd like to start at the beginning. You are responsible for a very dynamic public art space, as well as a productive fountain company. How did you get here?

**JENNA DIDIER:** I was always interested in social space and the movement of people through it, the interaction that's possible there as opposed to in private, domestic or even institutional spaces. I started off studying architectural theory, which, at the time, was the language of architecture; architecture had aligned itself with critical theorists. Yet, I didn't feel comfortable in that realm. I wanted some grounding.

My first love was sculpture, so my mother suggested that I get a job at a local fountain company. I kicked and screamed and refused to go, was not even interested in seeing the facility, because I thought it had nothing to do with art. Finally, I went to the fountain company and, low and behold, they were doing really fascinating stuff. I realized that fountains are machines that get embedded in the landscape, embedded in public space. So I asked them for a job.

This was 1991, in Minneapolis, Minnesota. I was still in school at the time, and I kind of developed my own major. I was able to learn AutoCAD, submersible systems, electronics and programmable logic computers, which turned out to be invaluable later when I moved to Los Angeles and started doing special effects.

**JC:** What year did you move to Los Angeles?

**JD:** I moved to Los Angeles in 1998, but first I moved to San Francisco—very rarely do small-town Midwesterners go right to a big city like Los Angeles. I moved to San Francisco in 1995,

and got away from fountains for a few years. I worked for a robotics group and was involved in machine art. But you can't make money off robots, well, not art robots anyway.

**JC:** Did you come to Los Angeles to start Fountainhead?

**JD:** I didn't. I came here and got a job with a fountain company in Orange County and worked there for a few years as the manager of design and engineering. Then I got a job at a scenic fabrication company that specialized in architectural scenery; we did a lot of work for Disney and Universal Studios. I got laid off after 9/11 when theme-park attendance dropped. In a weird way, that was the best thing that could have happened to me. I started Fountainhead and M&A simultaneously in January 2002.

When Oliver joined me in 2004 things really started clicking. He got what I was doing right away. He's so talented in many areas like animation, of course, but also in designing programs and, coming from a machine-art background, he also has a real faculty for the more technical aspects of things, which comes in handy because we are finally getting closer to realizing just what fountains will do to more responsive architecture.

**JC:** M&A is one of the few instances in which the community can get hands-on involved in an architectural project. Did you know what you were going to create when you started M&A?

**JD:** I really didn't know. When I got the property it was a parking lot with a chain-link fence along the front. I was starting my fountain practice, and I knew I was going to have my offices here,

but did I really want a concrete garden statuary out front? Or did I really want a storefront for the public? What I really wanted to do was get back to what I love, which is public space, and start working with the people that intrigue me, which, by and large, are architects and designers who are working on the really fine edge between what they envision and what's possible to be built.

I talked to Marcos Novak, who's the father of "transArchitectures" and this concept called "liquid architecture." When he was in school, he got a double degree in architecture and computer science, this was before AutoCAD, and he recognized that digital design was the future for the built world. But he also firmly believed that the built world wasn't the final boundary of reality and that entire digital terrains were waiting to be explored, and through their exploration we could expand our consciousness. I was really fascinated by this extension of public space into the digital, into the web and into virtual reality, and I wanted to see this come full circle. I wanted to see that idea come back to realizing it in the tangible material space again. So I talked to him about my idea of having an outdoor exhibit space for architecture. Actually, I talked to a lot of people, because I'm not an architect and I didn't know if it would be useful. Most people didn't get what I wanted to do, but Marcos told me to do it—he understood.

**JC:** On the M&A website you have in-progress and construction shots of the exhibits, as well as final project photos. What are you trying to accomplish with that? Is that an effort to further engage the community?



**OLIVER HESS:** We'd like to do even more of that, more documentation because, really, we feel our way through it every time. We spend months researching all the different possibilities [for each installation] and things we've become interested in that might tie into it. And Jenna sets up workshops for people to come and talk about sub-elements that might be applicable. We try to share the whole experience of devel-

and open up the design process so that we will get more interesting, varied and effective places for us to live and work.

**JC:** Your mission is clearly tied to sustainability. By definition, part of what you do isn't sustainable—having a large, temporary Mylar installation [Maximilian's Schell], for example. How do you reconcile that?

*“The interesting fact about fountains is that although it is an evaporative system, it's not half as much of an evaporative system as a lawn.”* —JENNA DIDIER

opment with anyone who's interested because I think everybody gets a pretty unique experience out of it, regardless of how much technically they can do again.

Some of it's very arcane and some of it's very practical, but mixing the two together and not creating a separation, I think that inspires a lot of people. There's no reason why you can't do things in a completely radical way. And what we're doing isn't inaccessible—another person can come along and do this stuff in their own front yard if they wanted. We want to spread the idea that people can go that far with ideas and can call on their community to help them.

**JC:** Do you think these ideas can extend to traditional or commercial architecture products?

**JD:** Yes. When I look at what ideas have come out of architecture in the past hundred years and then what we're still doing on a large scale, especially in housing developments and commercial office projects, I think it's kind of terrifying that we keep building in the same way over and over again.

Architecture is about seduction and you can't have seduction without consensus, which is something that Jean Nouvel said, and that's what we're looking for. We're looking for a consensus building with seduction of the mainstream, seduction of developers to be more thoughtful about what they're building

**OH:** In the case of the Mylar, it was efficiency of materials—minimal surface for maximal effect sort of thing. And it was held up with just two cables. In that way, it was a matter of not using excessive materials. And the materials we used were beautiful; you could enjoy them again later.

**JD:** I believe that people are attracted to shiny things, and in order to get their attention, and in order to push the dialogue further for what is sustainable, it's entirely appropriate to mount really effective installations, architectures and environments that are not necessarily what you would think of as sustainable at first glance. But, as Oliver mentioned, there's a real economy of materials and construction that's being achieved. For the pneumatic architecture that's out front right now [Bubbles], we've created this shifting environment of multiple walls using nothing but air and fabric—the heaviest piece out there is the steel cone that holds it all. For the amount of surface area that we achieved, it's extremely light-weight and economical.

**JC:** Can you tell me about your interest in water and what you see as its relationship to Los Angeles?

**JD:** My hero of water issues in Southern California is Bill Roley, a professor at Cal Poly Pomona and the director of the Permaculture Design Institute for Southern California. His motto for water is a really simple one: “Slow it, spread it,

sink it.” I think if we applied that motto to the permitting process for everything that gets built in Los Angeles County we would go a long way toward eliminating pollution in the L.A. River and eliminating pollution into the bay.

Toward that end, the first thing that I did when I started the exhibit space out front was tear out all the concrete and make it a permeable lot so that, at least, the area was not going to be sheeting water off into the gutter. The next thing that we've done is build a water-catchment system to capture rainwater as it comes off our roof and, actually, the neighbor's roof, too.

**JC:** How sustainable are fountains?

**JD:** The interesting fact about fountains is that although it is an evaporative system, it's not half as much of an evaporative system as a lawn. The water in a fountain is re-circulating, and if you rig it like I do [referring to the fountain at M&A's exhibition space], it captures rainwater and prevents runoff from going into the sewers. As an additional feature, if you replace a patch of lawn with a fountain, you're going to conserve water.

**JC:** What about energy use?

**JD:** That's a good question because it does take extra energy. For most residences, I certainly don't recommend a fountain of that scale; that's really a commercial scale [referring to the fountain at M&A's exhibition space].

I see fountains as kind of a gateway feature that takes you on the first step toward water-catchment and even gray-water systems. In that same way, as much of a novelty as solar-powered pumps are, they are a great way for people to familiarize themselves with free energy and solar power and understand how that works. Also, the fun thing about a solar-powered fountain is that it reflects the mood of the day—when the sun is shining you get a really nice boisterous effect; as it starts to cold over, it calms.

I don't think that fountains are going to go away. Even as energy prices increase, I think fountains will persist in the landscape, simply because they are so enchanting.

**JC:** Tell me about your third entity, infranatural.

**JD:** With M&A, we're more interested in inviting other people to come and experiment in that



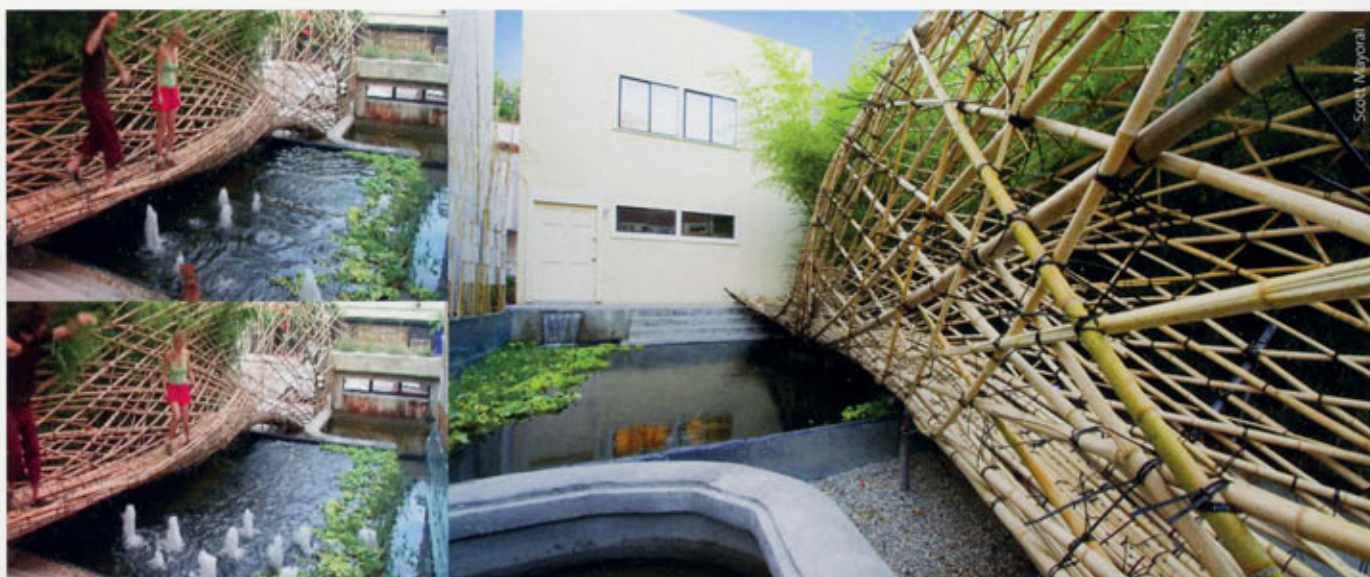


*Fountainhead's commercial applications of fountains and water features run from private residences to civic plazas to institutional campuses. (Left, Stainless steel spillways at residence, Venice, California; Right, Walkway Memorial Fountain, Hollywood Forever Cemetery, Los Angeles)*



*The Fountainhead facility serves as an exhibition courtyard for rotating architectural and landscape installations overseen by Fountainhead's nonprofit research group, Materials & Applications. (Left, Maximilian's Schell, Ball-Nogues Studio; Right, Bubbles, Fox Lin, NONDesigns and Brand Name Label)*





Let There Be Monsters, a collaboration between infranatural and workshop LEVITAS, showcased the SmartFountain, a system Didier and Hess invented to create people-responsive water effects using surveillance technology. In the M&A installation, where the effect was realized using traditional vertical jets, the water followed people's hands up and down like a scene from the Sorcerer's Apprentice. A permanent installation of the SmartFountain system is underway at a residence in Santa Monica, where, as people cross pavers in a reflecting pool, ripples will emanate from the pavers as though they were floating on the water.

space, and Fountainhead is more commercial, so infranatural is just a way for us to experiment with technology-related projects.

We just did an installation at a power plant in Redondo Beach, which was an interactive system using the same technology that we developed for the SmartFountain™, but using light instead of water. That's what infranatural is—it's more about looking at how order and function evolve out of natural systems and working with the elements.

**JC:** *infranatural* teamed with workshop LEVITAS for the *Here There Be Monsters* exhibit, which succeeded *Maximilian's Schell* and also garnered an AIA/LA award. How did that collaboration come about?

**OH:** I don't think that anybody was really comfortable going up after *Maximilian's Schell*—the proposal rate really dropped. And Jenna and I knew we had to step in. We wanted to do something with water and knew we had some ideas, like the SmartFountain, we could experiment with.

So Jenna and I started developing it—we knew we were going to collect rainwater and

make a giant pool of water. And Jenna put together an amazing group of supporters who provided us with all the equipment and materials. We knew that we wanted to make a bamboo bridge. We talked to Arup's Bruce Danziger about it, and he had some former students who had worked on a bamboo project whom he thought would be perfect for it.

**JD:** It was a very collaborative process. We were involved in the entire project until the very end when the piece was nearing construction because there was so much we needed to do with the fountain installation and the water-catchment system.

**JC:** What would you like to see going forward? Do you have a vision for the projects you would like proposed for M&A?

**JD:** We do. Part of what we're doing with the exhibits is attracting anybody who is interested in pushing things forward as far as architecture goes. I think there are other organizations that really push a "green" agenda and attract like-minded people that way, but I want to bring in people who want the big house and SUV, the

massive consumers. I want to catch their attention because I have something to tell them. We offer things like green-roof workshops, or we show them our fountain and mention, "By the way, this is flooded with rainwater we caught off our roof. Look how much fresh, clean water you too could use and reduce your utility bills and the amount of runoff that goes into the ocean in the process."

Also, with every installation we try to include some kind of sustainable upgrade to the property, and toward that end, we'd love to see an installation that has stacked functions—at the same time it's creating a beautiful environment, it's also cleaning the air and creating habitats, slowing down water and sinking it into the water table, and growing food. I don't think that this should be the domain of sustainable or living architecture alone; I think this should be the domain of all architecture, whether it's Frank Gehry and the affective architecture or whether it's William McDonough, there should be beauty, magic or illusion, interactivity, and the stacking of function as it creates a sustainable and smart habitat. ■