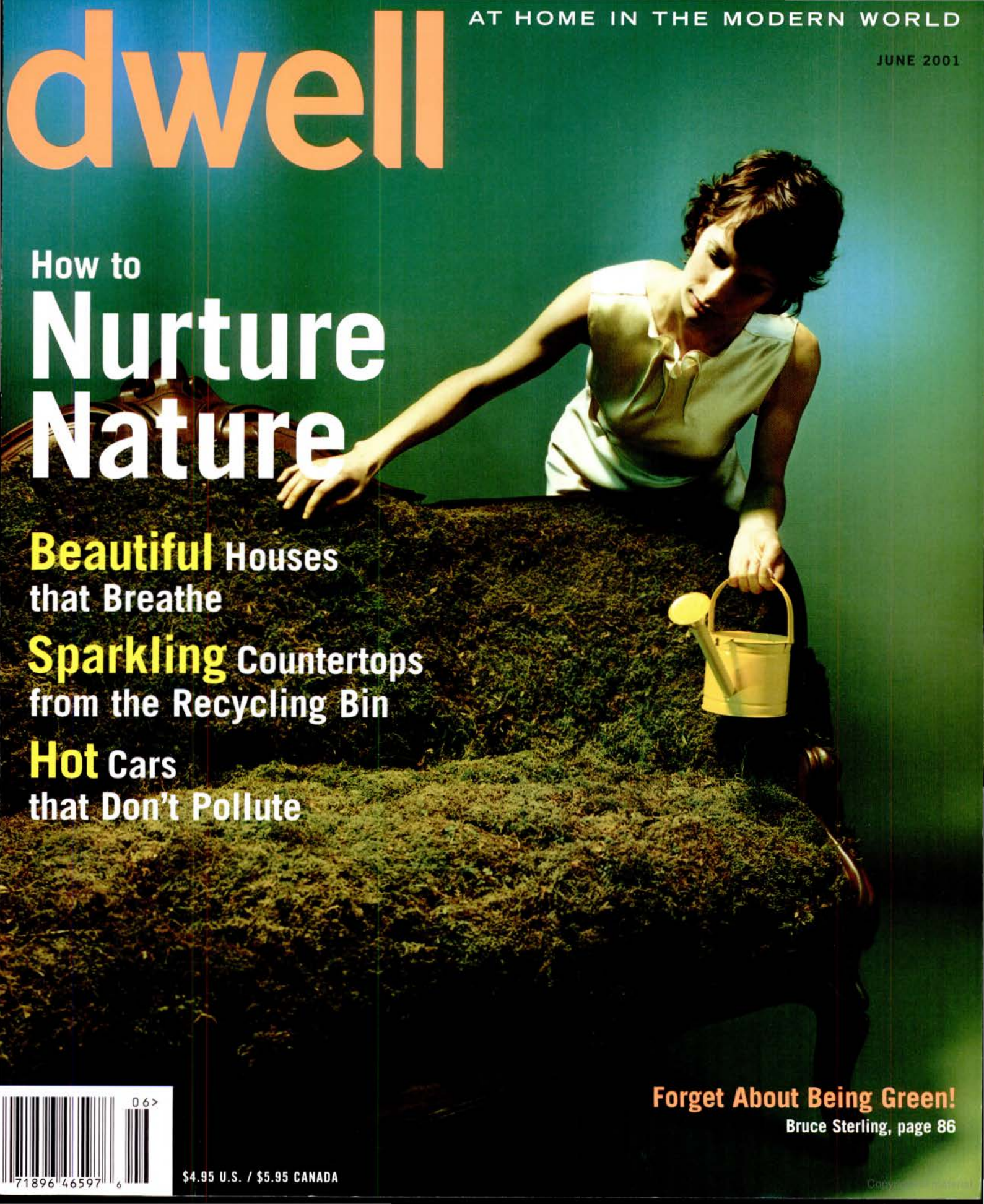
dwell

AT HOME IN THE MODERN WORLD

JUNE 2001



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Bruce Sterling, page 86

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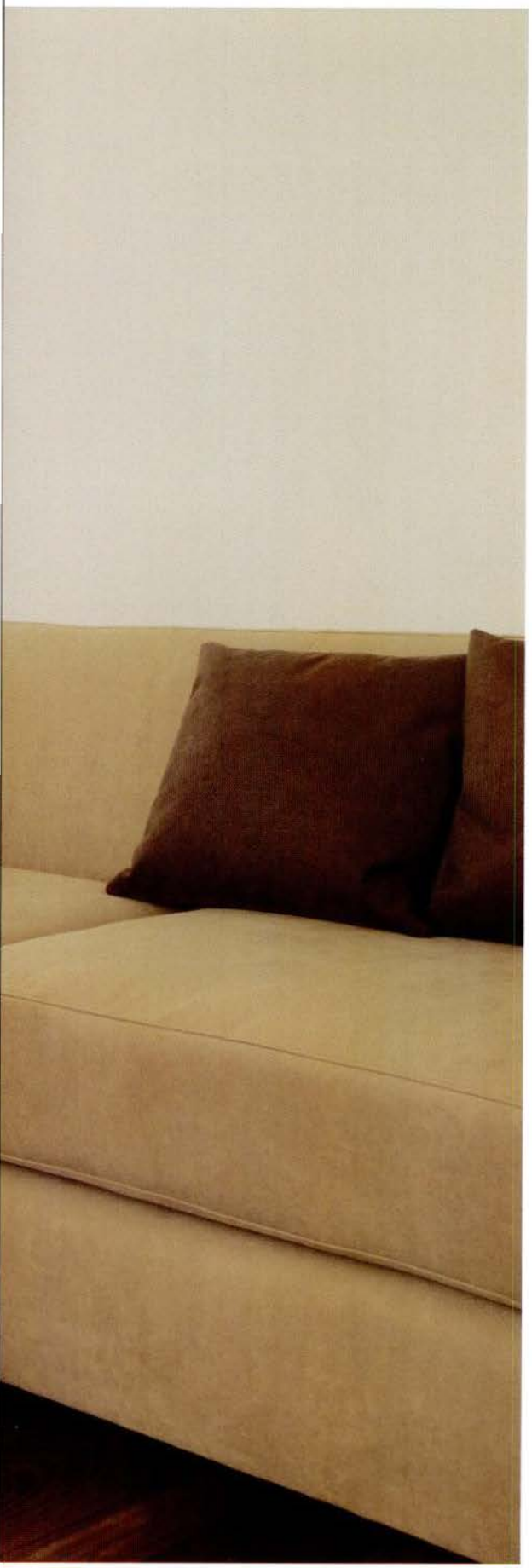

Imagination Is All It Takes

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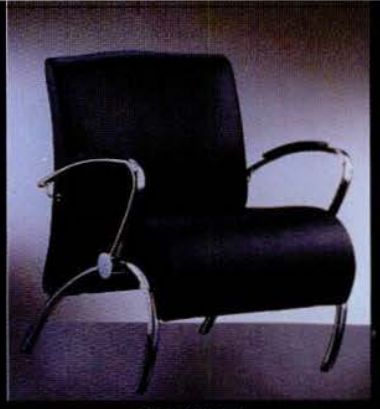

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COVER
Grandma's Victorian sofa could probably gather moss by itself, but this one had help. Artist Mary Lois Hare (see interview, page 91) reupholstered a family heirloom with cool, green moss. **Photo by Daniel De Souza.**

"Greens excel at spreading dread and malaise. Alarmism is still what they're best at. When it comes to specific accomplishments, greens may be the worst designers ever." —**BRUCE STERLING, PAGE 86**






CONTENTS

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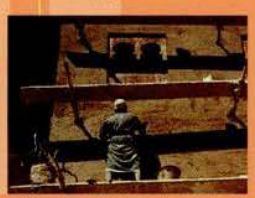


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THE FACET TABLE 4 6D x 22H
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designed by gary hutton

Vignelli's plastic dinnerware for Heller (1971).

The Bouroullec brothers' porcelain dinnerware for Habitat (2000).

Just received my first issue of dwell. Congratulations. I read the article on Tom Dixon (dwell, December 2000) with quite a bit of skepticism. Shame! Shame! Tom is jumping up and down because the Bouroullec design bears a striking resemblance to Massimo Vignelli's dinnerware, which we have produced continuously since 1971. It is in the Museum of Modern Art's design collection.

ALAN HELLER
Heller Incorporated
New York, New York

I just finished reading your April issue cover to cover. I do not recall ever having done that with any magazine.

Kudos for taking what is potentially a droll subject—prefab housing—and providing an exhaustive overview of its amazing possibilities, both technologically and socially.

Your "real-life" insights into various aspects of the industry (the sleep-ability of high-style sofa-beds and the interviews with a contractor and a window manufacturer on what it takes to build a modern house) were also highly enjoyable.

And I could go on and on. You've created a truly compelling, complete publication—and in such a short period of time! Here's looking forward to the next issue.

BILL SAWICKI
Washington, D.C.

I wanted to let you know that my spouse and I have enjoyed your February 2001 issue, our first, and not to be the last. We've not handled any other magazines dealing with "architecture" for many of the reasons and rationales outlined quite succinctly in the "Fruit Bowl Manifesto" (dwell, October 2000). Most of the mass-market "home styles" available here in Houston are, to be blunt, laughable. The only plus is the lack of zoning in the county, which allows one to take matters into one's own hands.

Speaking of Houston . . . Where was Mimi Zeiger treading around in the Fifth Ward? We couldn't find any trace of the activity she writes of in "Utopia" (dwell, February 2001) and we live in Houston. Any hints?

JERRY L. HAJEK
Houston, Texas

Editors' Note: Last we checked, ground had not been broken for the houses Mimi wrote about.

In his article "Extreme Retirement" (dwell, February 2001) about a home designed by Michael Hughes for his parents, David Greene notes that the design "is not a paradigm but a conversation starter." How right he is. Planning for the future is a difficult topic among children of seniors, and Hughes should be commended for tackling it and taking action. Greene calls attention, however, to Hughes' glaring inconsistencies in considering the future abilities of his parents in designing a home for the rest of their lives.

The house has doorways for wheelchair access, but a second floor accessible only by stairs. It has a roll-in shower, but the controls are hard to reach from a wheelchair.

Hughes made sure that the view from ►

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HermanMiller for the Home

upstairs was better than in the living room, to encourage his parents "to climb up and down for as long as they are able." Should we assume that when that time comes, they won't care about a view anymore—or access to the bedroom or bathroom, or attic storage that is accessible with "no stairs required"?

I certainly hope that other children take on the challenge to plan for their parents' "aging in place" as Michael Hughes did. I only hope that they don't follow his design examples. There is no need to build in barriers for the sake of aesthetics, and I believe your magazine should make this point in future issues.

JAMES MUELLER, IDSA
JL Mueller, Inc.
Chantilly, Virginia

Thanks for the article on Eva Zeisel. Since Bouquet by Hall China designed by Eva is my wedding china, I am always interested to know more about her. But since I was married in 1952, my coffeepot predates the one in your picture—same pot, only mine has flowers on it.

It still sets an outstanding table.

PAT PARSONS
Towanda, Pennsylvania

I had a chance encounter with your magazine at Whole Foods. I loved every article (and your advertising—imagine!). Visually, the title and the cover intrigued me; looking inside, I was sold by your article on rammed earth housing. I did expect more than what I found in the end, but am still sold on the concept and the presentation. Thanks for being so different, less status-oriented, and less upper-class-oriented. Would you consider a broader article on rammed earth residential building? You'd have one delighted reader.

OLGA MEZA-LEHMAN
Chicago, Illinois

Editors' Note: We hope this issue fits the bill.

While waiting for a delayed train at Grand Central Terminal, I quickly noticed dwell—a newcomer to the static rack of design publications—and started turning pages.

I was particularly interested in the well-profiled homes in some of the more "obscure" cities within the U.S. (dwell, December 2000), designed by talented yet not all superstar architects.

After a positive experience with issue two, I immediately sought out issue one and was equally intrigued. The layout and graphics are stunning. The content is well chosen. Philip Nobel's article in issue one ("So What's the Deal with Architects?") is a gem. Also, the pull-out calendar, describing events, competitions, books, and openings is a great collage of graphics and information.

I have since added your magazine to the stack of design magazines stuffed into my mailbox monthly, to read during my daily commute into NYC. dwell has certainly delivered much of what I am looking for in a design publication . . . it's a keeper.

JEFFREY J. RESETCO
Gruzen Samton, Architects, Planners and Interior Designers
New York, New York

I liked your "Fruit Bowl Manifesto" (dwell October 2000) for several reasons. Besides agreeing with it thoroughly, I liked it because I believe there aren't enough manifestos being created these days. Nice work.

MARK WIEMAN
Beam Design
Seattle, Washington

I just picked up issues #2 and #3 on a news-stand and am seriously bummed that I missed #1. Do you sell back issues?

I love everything about the magazine, and even though I love "high-end" design, as a grad student in urban planning, I appreciate that you take the time to delve into the other elements such as economics, social impact, and livability that make truly great architecture great. Keep up the good work, and don't be afraid to show more photos of these places instead of just teasing with descriptions.

Thanks.

DONOVAN FINN
Brooklyn, New York

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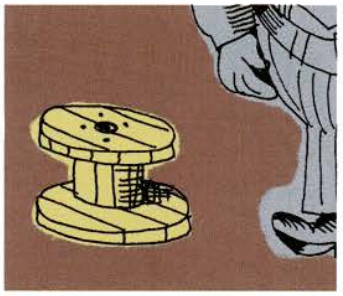

Green Design Free-for-All

May 1–May 31

This issue of dwell is full of provocative ideas and bold assertions, from Bruce Sterling's suggestion that "greens are profoundly ineffectual people" to Jersey Devil's belief that it's possible to live year-round in South Florida without air-conditioning. We invited everyone who participated in this issue—architects, designers, homeowners, and writers—to come meet you, the readers. Whether you're looking for a philosophical debate or want someone to tell you where to buy bamboo flooring, come to www.dwellmag.com beginning May 1.

The Wyatt Saga

The story of the Wyatt house in Louisville, Kentucky, featured in our December 2000 issue, has taken on a life of its own on our Web discussion board.

Here are some excerpts:

Lavardera: I would like to know what gets people's fur up about contemporary buildings. It can't just be the contrast between old and new because we all experience that every day and it's usually not a problem.

Cary: I agree. Americans demand the latest in technology, fashion, you name it. But when it comes to their homes, people just automatically draw on historical styles without asking themselves what's appropriate for today.

Cire: This discussion is not about what the people of this community like or dislike. It's about what they perceive to be something "others" potentially will not like, something that could negatively impact their property values. The people of this neighborhood are not looking for someone to baby-sit on Saturday night or carpool on weekdays. They are looking for conformists.

The saga continues at www.dwellmag.com

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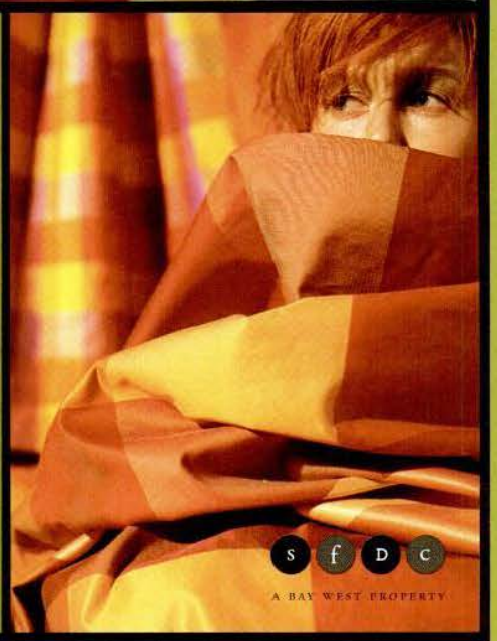

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A BAY WEST PROPERTY

POWER

That's what this issue of dwell is about. You may not see the connection between a hippie-dippy subject like green design and power. You may not think that a magazine featuring a house made from rammed earth or one ventilated and insulated so well that it doesn't need air-conditioning represents power in the big ticket, fat cat, mover-and-shaker sense of the word. But we do.

Understand that we are assembling this issue in the midst of California's electricity crisis. For weeks, the scary-sounding "stage three alert" has been a regular feature of life here. It feels an awful lot like the Y2K chaos that we anticipated a year ago. In fact, all those candles, camp stoves, and blankets some of us stockpiled in late 1999 would come in handy right about now.

It seems that our semi-deregulated utilities cannot buy enough power in the newly competitive marketplace to guarantee an uninterrupted flow of electricity. The utilities are claiming to be on the verge of bankruptcy and we face daily threats of "rolling blackouts," a series of strategic rest periods for the beleaguered grid. Here at dwell, we get emails from the production manager reminding us to be vigilant and regularly save our computer documents lest a blackout roll over us. On the TV news they urge us to have Superbowl parties so that fewer TVs will be sucking up wattage on Superbowl Sunday (and so there's enough electricity left over for *Survivor*).

Okay, this is not exactly London during the Blitz. The hardships imposed have been, so far, pretty minor. But the whole thing is unbelievably stupid. Californians are used to coping with natural disasters. This crisis, however, is entirely man-made and seems to be largely about the energy industry throwing a fit to get what it wants: an end to the cap on the rates it can charge consumers.

Tantrums, as any two-year-old knows, are often an effective means to, say, a new Sing 'N Strum Barney. Suddenly there's talk of building new nuclear power plants. President Bush has suggested loosening up air pollution rules to inspire power companies to build more plants.

So let's talk about power.

I arrived in San Francisco from New York in November 1999. With all my household belongings in a moving truck somewhere in America, I flew in with a suitcase containing sheets, pillows, a coffeemaker, and a single cotton blanket. It didn't occur to me that one thin blanket wouldn't be enough. The blanket was perfectly adequate on all but the coldest winter nights in my New York apartment. In New York, double-glazed windows, insulated walls, and overachieving radiators kept my apartment way too warm. I never imagined that in California, where there was no winter to speak of, in my new, substantial-looking building, I would wake up in the middle of my first night shivering. I later learned that there is no insulation in the walls, and my apartment—like so many California apartments—is situated directly above a parking garage. Inside air is often colder than the outside air.

As it turns out, insulation, while required by many local building codes, is still a novelty here. And heating systems tend to be borderline medieval. It's a rare house that actually has central heating. Many homes just have wall-mounted gas heaters in each room, or baseboard electric heaters, both of which currently cost a small fortune to run. This is because even Northern Californians buy into the myth of the endless summer and embrace a vision of lifestyle that blurs the boundaries between inside and outside. But it does get cold here. Really, it does.

The crisis, triggered in part by the rapid growth of the energy-hungry high-tech sector, points up the failure to apply just a little of that technological brilliance to anything as mundane as efficient home heating. The whole thing—have I mentioned this already?—is stupid.

So, this issue of dwell is about power. After all, who could be more powerful under the current circumstances than someone who uses passive solar to heat their home or a windmill to run their meter backwards, sending much-needed juice to the grid? Who is more powerful than the person whose thick earthen walls provide insulation? Who is more powerful than someone who, with a rooftop photovoltaic system, can watch the Superbowl (not to mention *Survivor*) uninterrupted, rolling blackout or no rolling blackout?

You tell me.

—KARRIE JACOBS, EDITOR-IN-CHIEF
karrie@dwellmag.com

ILLUSTRATION BY MARK NEWGARDEN

The Hertz's sun-filled inner courtyard provides cross-ventilation and a place for their three kids to play.

PHOTO BY JEFF MINTON

HOUSE OF SEVEN PATIOS

Only in Los Angeles would building code insist on three parking spaces for a single family dwelling on a 40 x 90 lot. Architect David Hertz came up with a creative solution for the home he designed for his family in Venice, California. Hertz found a way to create an outdoor space that the house and its three-car garage would have otherwise obliterated. "The seven-level house is best described as a kind of Chinese puzzle," he explains. "It's the interplay of spaces that makes this building very interesting in its use of outdoor spaces.

"I wanted a house that was climate responsive and followed the cues of California modernists like Schindler and Neutra, who, coming from Austria, really saw California as an ideal climate to experiment with outdoor living. We have an outdoor sleeping porch off the master bedroom, and four levels of roof-decks. Each open space has a function—there are fruit trees and a vegetable garden on one level, a hot tub and outdoor shower on another. The house was carefully designed to work with the ocean breeze that flows right through it. A series of electric windows and skylights automatically open or close based on the house's temperature."

Hertz's practice, Syndesis, focuses on ecologically sensitive architecture, and designing the 2,700-square-foot house allowed him to practice what he preaches. But in the end, what makes this environmentally sound house so successful is its sense of fun. Lots of architects specify concrete floors; few design them so they can be trampled on and hosed down. "The kids can ride their scooters and skateboards in the house. We're near the beach, and there is always sand around so we were interested in a surface that was beautiful, economical, and easy to maintain. When the kids eat Popsicles, we don't worry about the floor. It's virtually indestructible." And the wall running longitudinally from front to back that houses plumbing on the first floor and functions as a Trombe (solar) wall on the second? It was inspired by his son's fascination with the dimetrodon, a dinosaur with a big fin that would orient toward the sun to warm itself.

"The house became a working laboratory that allowed me to try out innovative building materials and systems," explains Hertz. "The experience has made me a better architect." And it turned out to be a great place for the kids to play.

—ALLISON ARIEFF

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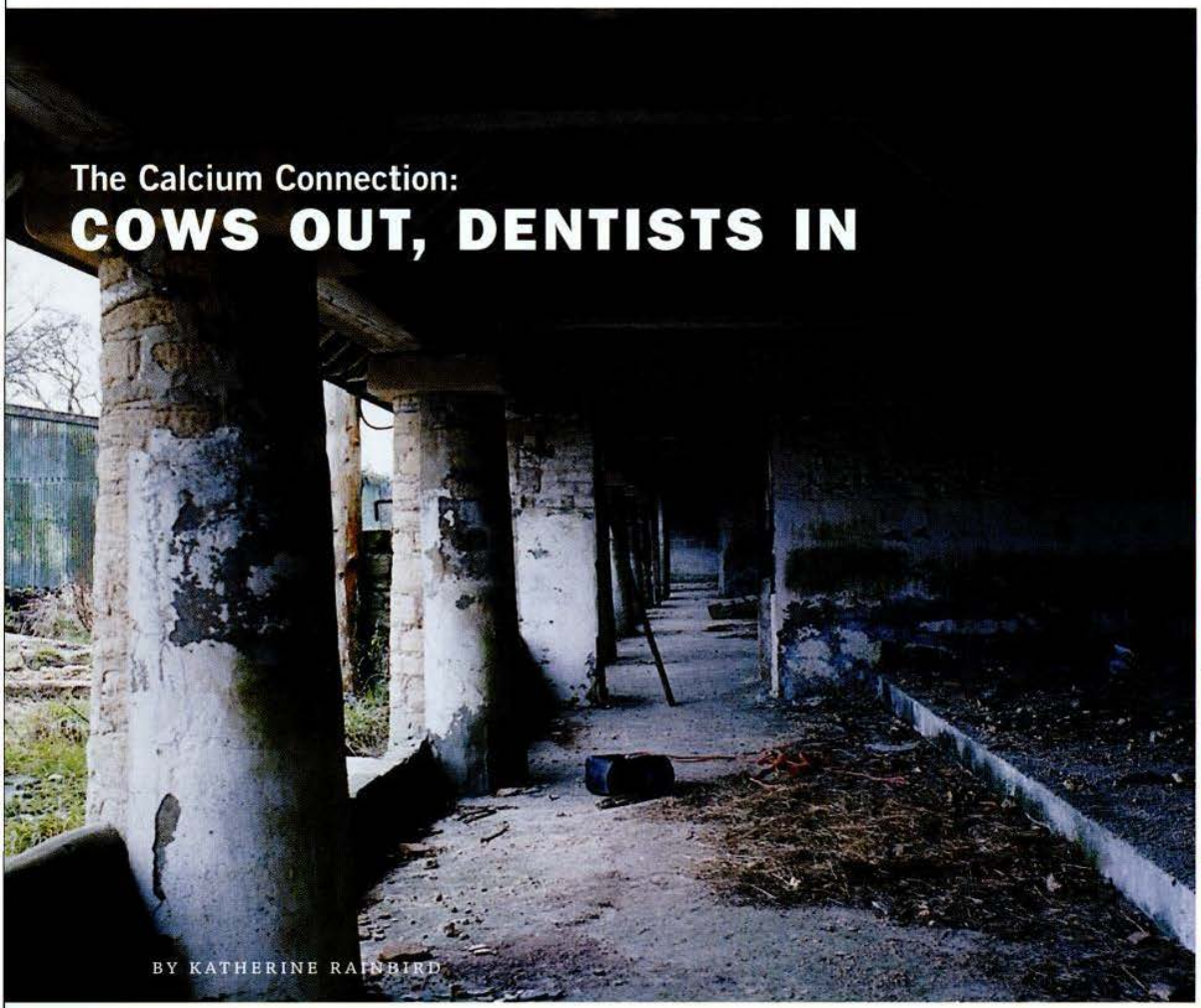

BY KATHERINE RAINBIRD

In May of 2000, a pair of London dentists, David and Ceri Houston, purchased the Long Barn, a mid-19th-century, Grade 2-listed barn in Wiltshire, about 100 miles west of London. 1 A listed building is one classified by the Department of National Heritage. Introduced in 1947 to protect buildings of special architectural or historic interest in England and Wales, listing covers all features within the boundaries of the property in addition to the buildings themselves.

The old barn fulfilled most of the Houstons' requirements: private yet situated within ten minutes or so of the motorway, architecturally interesting (yet rather glamorous considering it's a cowshed) and perhaps most important, gorgeous views of protected countryside.

The next step was to hire an architect. The Houstons chose Studio Azzurro, the London- and San Francisco–based architects who had designed their dental practice. 2

Fall 2000

Studio Azzurro's Chris and Milla Gough-Willetts (another husband-and-wife team) plan to transform the barn into a home that will include an enlarged living area, study areas for both David and Ceri, and a master suite. They created a design that integrates the house, gardens, and outlying land into an aesthetic whole.

"We had two major imperatives for this project," Ceri explains, "to have a simple, elegant living environment in a tranquil and private setting, and that the whole thing be seriously low-maintenance. Nothing that takes up time that we simply don't have. Clean, spacious, airy, easy, and fitted to modern life." 3

"With a listed building it can be a complicated process that depends a lot on sympathetic local planning officers," adds Milla. "We have to work within the rules but at the same time we are trying to create something different and beautiful."

The architects chose a local contractor, well-known for his experience with listed buildings and with a good reputation at the planning office. The initial plans for the Houston residence were approved.

Winter 2000–2001

Just before Christmas, the contractor took possession of the site and a security fence was erected around the entire property.

As Chris explains, "just because we're working in the heart of the country doesn't mean we're immune to crime. The tiles on the roof of the barn are original and hugely in demand. It's not uncommon for roofs to be stripped clean in the night and the tiles to be sold off for serious money. They are really hard to replace, so we have to take precautions."

In January, the work began in earnest. Not a favorite time of year for the contractor and his workmen. The weather is bleak, windy, and freezing. Stomping around the barn on a frigid January day, Ceri's desire for under-floor heating makes perfect sense. "No cold flagged floors for me. I need warm feet!"

You can tell it's cold because the workers move really fast to stay warm. Chris actually had to ask the contractor to slow down—which might be a first in the history of building—but there is a precise schedule to adhere to.

"There is no point in rushing things at this stage," Chris says. "We've timed the whole thing carefully for completion in October 2001."

Once the specifications have been signed off on, the main phase begins. The weather is beginning to warm up, which will definitely make for a happier construction team.

For updates, check www.dwellmag.com

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The Skin Cancer Foundation has recommended VISTA as a device for UV protection of the skin.

The spectacular walled city of Shibam is known as the "New York of the Hadhramaut."

PHOTO BY PAMELA JEROME

MUDHATTAN

One of the most adaptable, most versatile, and least polluting materials available has been around since time immemorial and can probably be found in your backyard.

Its name is mud.

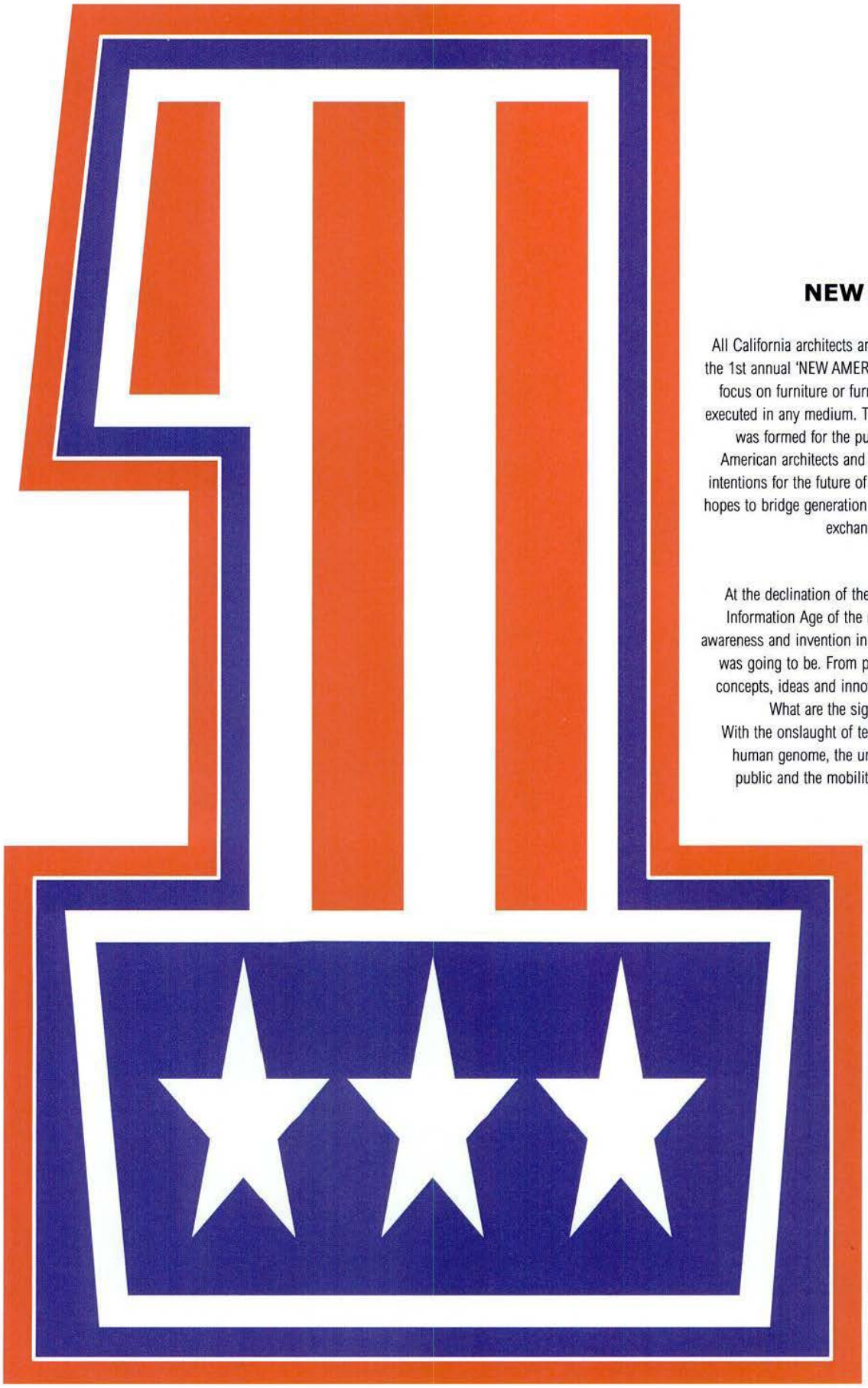
Rammed earth may be all the rage in sustainable architecture circles today but its precursor, mudbrick construction, is one of the earliest known methods of building. The Great Wall of China is largely mud, for example, as is Hadrian's Wall in Great Britain. Our notion of the material's usefulness, however, is mostly limited to huts and pies.

This makes a first glimpse at the mudbrick towers in southern Yemen all the more dazzling. The fortresslike "skyscrapers" are indigenous to the Hadhramaut region of Yemen (a remote area notorious for being the ancestral home of Usama bin Laden, America's most-wanted terrorism suspect). Remarkably modern in appearance, these ten- and 12-story buildings have existed in the region for thousands of years.

The centuries-old practice of mudbrick construction has remained virtually unchanged since its inception, explains Pamela Jerome, an architectural conservator who collaborated with producer/director Caterina Borelli on the documentary *The Architecture of Mud*. Masons make mud bricks in wooden molds of varying sizes and then construct a stone foundation. Straw-reinforced mud bricks are laid on top of the foundation and secured by mud mortar. Wood is used for lintels and joists. Since oppressive summer temperatures cause the walls to crack, construction takes place only during the winter months. Each floor is given eight months to a year to dry out and settle before the next floor is erected. As a result, it can take from five to eight years to build a house. There are economic reasons for this protracted process as well—people add on as money becomes available.

In recent years, the traditional vernacular of this remote hinterland has shown some signs of outside influence. "Some buildings have begun to look like Gulf architecture, sort of postmodern Arabic," Jerome observes. While the encroachment of paved roads and concrete construction threatens the existence of mudbrick architecture, it is the hope of preservationists like Jerome that the documentation of mudbrick techniques will help to preserve and perpetuate this ancient tradition.

—ALLISON ARIEFF



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presents:

NEW AMERICAN DESIGN

All California architects and designers are invited to submit work to the 1st annual 'NEW AMERICAN DESIGN' competition. Works should focus on furniture or furniture usage, either conceptual or real and executed in any medium. The 'NEW AMERICAN DESIGN' competition was formed for the purpose of providing an arena and voice for American architects and designers, where they can showcase their intentions for the future of furniture design. As well, the competition hopes to bridge generation gaps and to encourage discourse and the exchange of ideas, experience, and technologies.

THEME:

At the declination of the Industrial Revolution and the birth of the Information Age of the mid 20th Century, there was a heightened awareness and invention in design and perspective of what the future was going to be. From post WW2 to the 60's and 70's came many concepts, ideas and innovations in design that mark these periods. What are the signifiers for 2000 and beliefs for the future? With the onslaught of technology, cyberspace, the mapping of the human genome, the unprivatization of both the personal and the public and the mobility of the work environment, how does one define personal space and its relevance?

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Watch out! The Toyota Ecom
is gaining on the Ford Excursion.

CHARGE!

Out of the way, you road-hogging Blazers and Suburbans. Move aside, you gas-guzzling Expeditions and Navigators. Vamoose, you monster Xterras and Grand Cherokees. The cute little electric cars are coming through.

We really want to believe the authors of the book *Natural Capitalism*—Paul Hawken, Amory Lovins, and L. Hunter Lovins—when they swear that the automobile industry, the very same industry that brought us the 14-mile-per-gallon Ford Expedition and the new 2.6-ton Toyota Sequoia, is on the road to "fundamental" change.

There is some evidence that supports the authors' argument. After all, Ford is currently promoting an adorable, battery-powered, Norwegian-built, two-seater they call the Think, and by 2003 will start selling a "mildly hybrid" (electric/gasoline) version of the Explorer SUV that promises a whopping 27 miles to the gallon. Toyota, meanwhile, has already sold over 50,000 of its hybrid car, the Prius, worldwide.

In *Natural Capitalism,* the authors lay out their vision for a "Hypercar," an ultra-lightweight vehicle that, in its ultimate incarnation, would be powered by fuel cells, thin membranes that combine oxygen and hydrogen to generate electricity. Our favorite part of this scenario is that the Hypercar, when parked, could turn its fuel cell into a 20- to 40-kilowatt power plant, pumping electricity back into the grid. A nation of Hypercar owners could simply do without money-eating utilities such as Con Ed and PG&E.

Back in the real world, we zoomed down the freeway to the San Jose Auto Show, where we blended with a sea of humanity, and all lined up to admire the latest cars: to touch them, to test their seats, to rub up against them like cats in heat. We were heartened by the enthusiastic crowd that gathered around the wee, electric-powered Nissan Hypermini. "I want one of those," a teenage girl told her friends. On the other hand, the wide-load Humvee was an equally powerful draw. "You'd be the coolest mom in the whole world," one boy insisted. The biggest throng gathered around the Piranha, a Pontiac concept car. "The trunk itself can double as a really big cooler," the Pontiac spokesperson breathlessly announced. On the road to fundamental change, it seems, there is no express lane.

Toyota Ecom

Price: Not yet for sale
Top speed: 62 mph
Range: Approximately 60 miles

The tiny little Toyota Ecom, a mere 110 inches in length, was developed for the Japanese market. It's powered by 24 nickel-metal hydride batteries. In the U.S., the brightly colored cars are being tested as part of a new theory of Park and Ride. Fleets of Ecoms will be deposited near transit stations and reserved for day use by commuters. The system, known as Crayon, is on trial at the University of California, Irvine.

Expert Opinion: "This is a great car for extroverts," notes Catherine Mohr, "because everyone who sees you in it will want to ask about the car." Mohr acknowledges that the "road feel" is a little "harsh," a problem she attributes to the short wheelbase: "Think of the difference in ride quality between a VW and a Cadillac." But she lauds the Ecom's generous, well-placed windows and concludes, "In terms of pure fun to drive, it wins hands down."

What We Think: Every Saturday morning in San Francisco, an environmental scientist we know who—go figure—works the weekend rush at Café De Stijl parks his Ecom directly in front of the restaurant. Shoppers, their canvas totes full of navel oranges and organic fennel from the nearby farmers' market, come and gape. The Ecom is, after all, the perfect San Francisco car. For one thing, it is unbelievably cute (and San Franciscans live for cute) and for another thing, its short wheelbase is a great asset in a city where the most prized real estate is an unoccupied sliver of curbside.

A NOTE ON OUR EXPERT

In the late 1980s, Catherine Mohr helped design, build, and race solar-powered cars for races such as Australia's World Solar Challenge. An MIT graduate, she now works in new business development at AeroVironment in Monrovia, California, a company known for its solar-powered aircraft and electric vehicles.

PHOTOGRAPH BY RJ MUNA

Honda Insight

Price: $18,980
Maximum speed: 110 mph
Mileage: 61 city / 68 highway

When it debuted in December 1999, the Insight was the first of a new type of car. The hybrid marries a three-cylinder gasoline engine with a thin electric motor, eliminating the need to cram every square inch of chassis with batteries. The electric motor provides power assist to the small gasoline engine, making it more fuel-efficient. The car's battery recharges during deceleration and braking.

Expert Opinion: "The Insight handles very much like a standard Honda," says Mohr. "They've gone a long way to make it feel just like a regular car." This is a good thing. If it feels normal, the customers will come. Mohr thinks that hybrid drivers might be unnerved by the Insight's failure to rev. "The battery pack gives the punch when you accelerate, so it happens quietly. The pedal response is a little slow with the first push, then, as you put the pedal to the metal, it really picks up."

What We Think: We are grateful to Honda for the Insight (and to Toyota for its hybrid, the Prius) because these are the first alternatives to the standard-issue internal combustion engine that are designed for ordinary people. You don't have to plug them in at night. You don't have to use a special pump at the gas station. You just go about your business. Slightly edgy styling is the only tip-off that there's something radical under the hood.

Nissan Hypermini

Price: $34,500 in Japan
Top speed: 62 mph
Range: 40–60 miles

Another toy-sized car from Japan, the 105-inch-long Hypermini is only available with the steering wheel on the right. It's powered by four relatively lightweight lithium-ion batteries. It has an aluminum frame, incorporates recycled plastics, and, yes, includes cup holders. And, just like the Goodyears on POTUS's limo, the Hypermini tires are designed to keep rolling even when flat. The city of Pasadena is trying the Hypermini as a sort of goodwill vehicle for parking enforcement officers.

Expert Opinion: "A really nicely put-together car," in Mohr's assessment. "It has more pep than some of the bigger electric vehicles." She was impressed by the car's handling, which she describes as "quite crispy." She notes that while both the Ecom and the Hypermini have safety features such as air bags and a "short crumple zone" that will absorb the force of an encounter with a stationary object, like a wall or a parked car, they are too tiny to be safe on a freeway full of hurtling SUVs.

What We Think: We love Hypermini's oddball appearance, futuristic and retro all at once. When we drove it, around and around the Pasadena Water and Power Company's equipment lot, we were impressed by how real it felt. This was no golf cart. This baby could corner. We happily zigzagged around giant rolls of cables and up and down aisles formed by huge racks filled with spare high-voltage gear.

Corbin Sparrow

Price: $14,900
Maximum speed: 70 mph
Range: 40–60 miles

Designed and built in Hollister, California, by Corbin Motors, a company better known for its motorcycle seats, the Sparrow is the hottest of the mini-cars. Powered by 13 12-volt batteries, it has golf-ball-inspired dimples on its fenders to minimize wind resistance. Legally, the Sparrow, with its Harley drivetrain, is a motorcycle, but (in California, at least) you don't have to wear a helmet because the bright fiberglass body affords some protection.

Expert Opinion: "They are taking a real risk here," says Mohr, "in that they believe they can change people's perception of what transportation is. It is a single seater, has three wheels, radical styling, and electric drive—there is nothing at all about this vehicle that is conventional." While Mohr respects the ideals behind the Sparrow, she isn't sure that a single-passenger vehicle would do her much good. But, she adds, "It is a very solidly built, well-put-together vehicle."

What We Think: Have we already used the word "cute"? No matter. That's exactly what the Sparrow is. When we visited Emeryville Sparrow dealer Ecarmotors, the neighborhood day-care children came over and responded to the candy-colored car as if it were a Pokémon. "Like, wow!" exclaimed one little boy. We appreciated the Sparrow's powerful acceleration, were flummoxed by the soft braking, and worried about sight lines that weren't as good as we'd like them to be, not if we were going to be the tiniest flyspeck on the interstate.

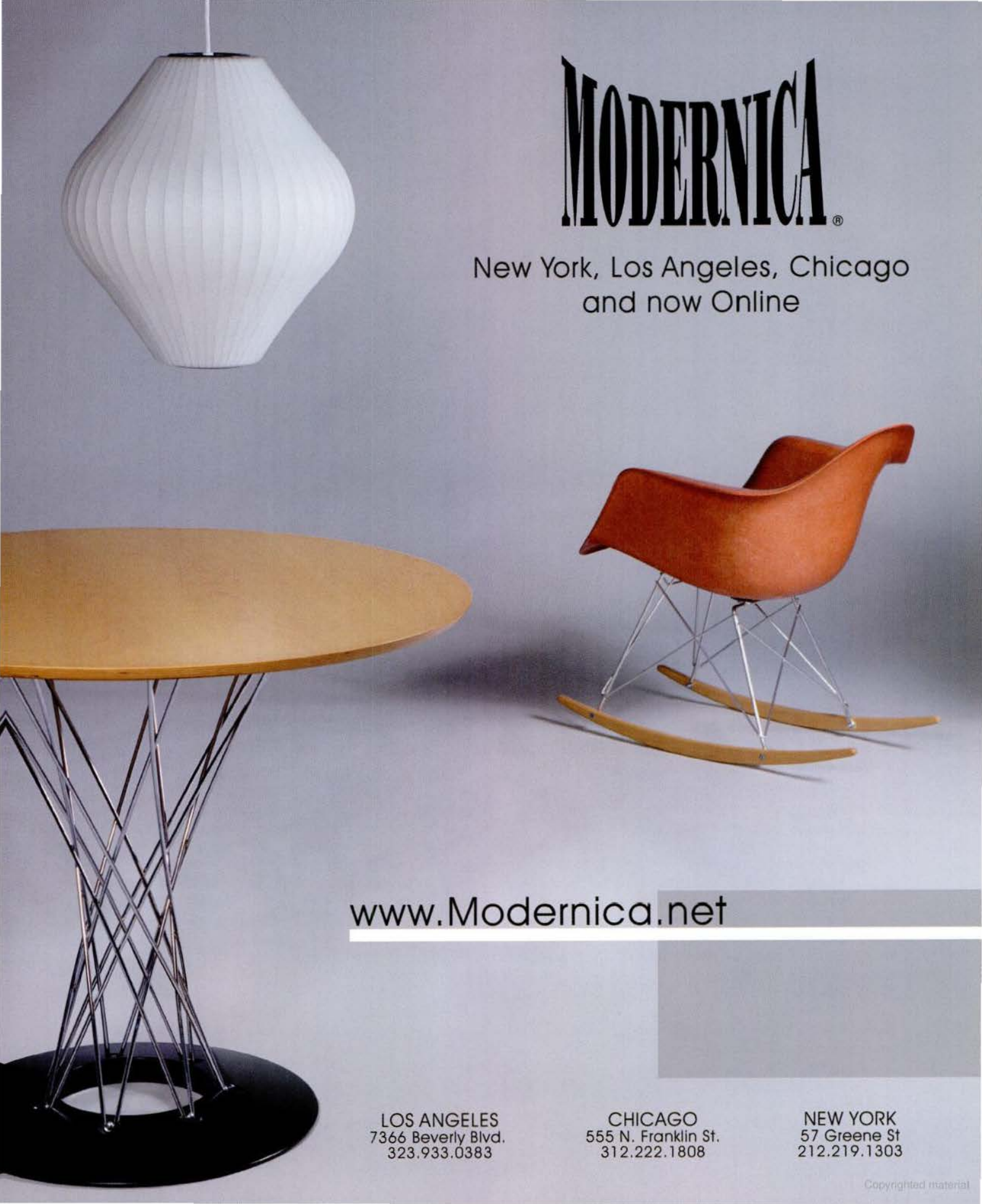
GM EV1

Price: $33,995
Maximum speed: 85 mph
Range: 100–120 miles

GM's EV1, with its sleek lines and rapid acceleration, is the Aston Martin of the electric vehicle world. It is the car that an enlightened James Bond would drive. According to EV Rental, a company that specializes in alternative-fuel vehicles, the EV1 "beats a Corvette off the line," going zero to 60 in eight seconds. In California, you can drive the EV1 in the HOV lane all by yourself.

Expert Opinion: "It doesn't handle quite as well as a traditional sports car, but of all the cars tested, it had the sportiest feel and the most positive handling," states Mohr. "This is a good car for the freeway, and has plenty of pickup for passing." Her biggest complaint is that the interior is "cramped," a problem Mohr believes is "exacerbated by the battery pack running down the car's middle."

What We Think: When we drove the EV1 around the McMansion-strewn foothills of the San Gabriel Mountains, we were struck by how easily the car zipped uphill, and were fascinated by the way the projected range on the car's charge indicator shortened as the intense climb forced the car's computer to recalculate. We loved the EV1 except at stop signs, where the car's indolent response to our pressure on the brakes reminded us of a certain rusted-out VW Beetle we occasionally drove in the 1970s. "That's because of the regen," explained our companion. In plain English, the brakes' energy was being regenerated and rerouted to the car's batteries. To be honest, we could think of places we'd prefer to see the energy go. ■



A sales clerk demonstrates the wonders of the 50" Plasma TV by Pioneer to Bonnie (left) and Hugh (right) Fogel.

PHOTOS BY EMIN KADI

INTO THE GREAT INDOORS

Sears has long held a place in America's consciousness as the ultimate purveyor of no-nonsense, no-frills domesticity—from clothes to the machines in which to wash them to the tools with which to fix the machines. So it came as a surprise to learn that Sears had decided to expand into the ever-so-chic interiors market. Taking a cue from Target (with its successful Michael Graves gambit) and Home Depot (who took do-it-yourself to the masses), Sears is rolling out its store, The Great Indoors—with outposts in Dallas, Scottsdale, Denver, and Detroit—and presenting designer brands in an environment that might make Bob and Sue from next door more comfortable dropping two grand on a stainless steel light fixture.

dwell, of course, could not resist the temptation to ask two experts to scavenge The Great Indoors for good design. Hugh and Bonnie Fogel, proprietors of Unicahome.com (a retail and online store dedicated to providing "art and design that is functional and affordable to the general marketplace") in suburban Detroit, happily obliged.

Bonnie: It is a huge store divided into areas [kitchens, baths, bedrooms, surfaces, and services]. They have a good selection with great brand names.

The store is clean, bright, and well fixtured. It doesn't let you in on the fact that this is a Sears offshoot, except that it says Sears on some of the price tags. It does not feel like a Sears at all.

Hugh: The way *our* store works is we argue about everything. Whatever items make it past the argument stage we buy. That's what happened here—we argued over everything.

1 Electric Fireplace $1,699

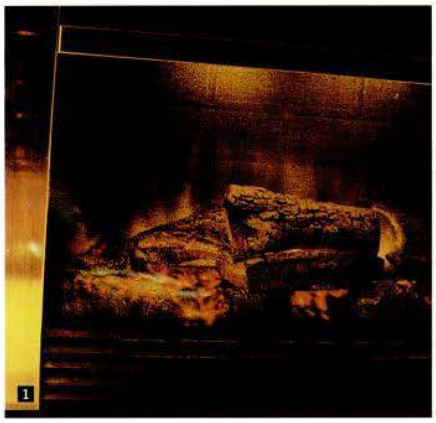
by Dimplex Symphony

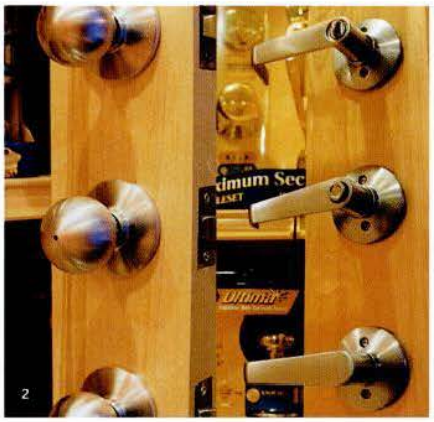
Bonnie: This is goofy. Most of them have a sort of federal-style mantle, a very simple wood mantle around them. In addition to being an electric fireplace, they have a ceramic log thing in there. It actually looks like fire. Now, I don't know if that is a hologram in there, or what the technology of that is, but it throws off heat—5,000 B.T.U. to be exact. So, standing in front of it really does feel like standing in front of a fire.

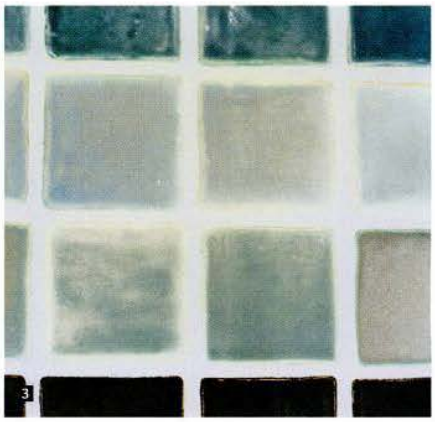
Hugh: The heat is optional. I was debating about whether it bordered on kitsch. But because it is functional, it won me over.

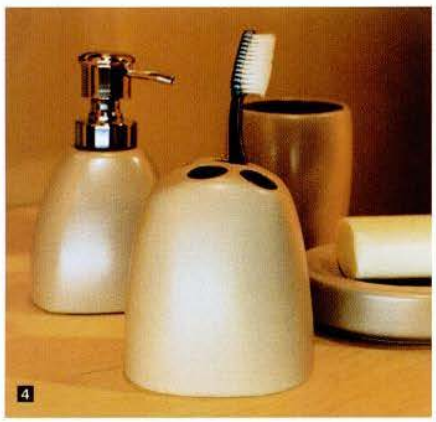
Bonnie: You could sit there and watch the fire. It looks like flames coming out.

Hugh: But at that price you might be better off burning up your living room. ▶









2 Schlage Doorknobs cylinder **$18.99**
(cylinder & lever models) lever **$22.99**

Bonnie: These are very classic, brushed aluminum, round knobs, which Hugh thinks are slippery if your hand gets wet or something. They are just very plain; they've been around for years. They are really great-looking and they're not a fortune. I think these are American so the installation is pretty standard. If I had to pick a modern, classic, inexpensive thing, this is it.

3 Prikeenan Tiles **$63 – $84 / sq. ft.**
by Beaver

Bonnie: This is a Wisconsin company. The tiles have a very handmade look and an extremely sophisticated color palette with really subtle shades. They are two-by-two ceramic tiles and The Great Indoors shows six tiles from a particular run. Other tiles just look so commercial and too perfect.

Hugh: As things get more standardized it becomes more difficult to get products that are done by hand. That is what attracted us—I mean, these tiles vary from having a lot of glaze to having a mixture of colors. One is almost completely devoid of glaze. I think for the right space it would be really amazing.

4 Mono Bath Set **$5.99 – $13.99**
by Umbra (designed by Alain Cayouette)

Bonnie: The Umbra line is great—a great price point and the line is just so vast. These are simple, plain shapes for not a lot of money. I don't think bathroom accessories get any better looking if you spend a lot of money.

5 Fisher & Paykel Stainless **$1,599.99**
Steel Dishwasher (two-drawer model)

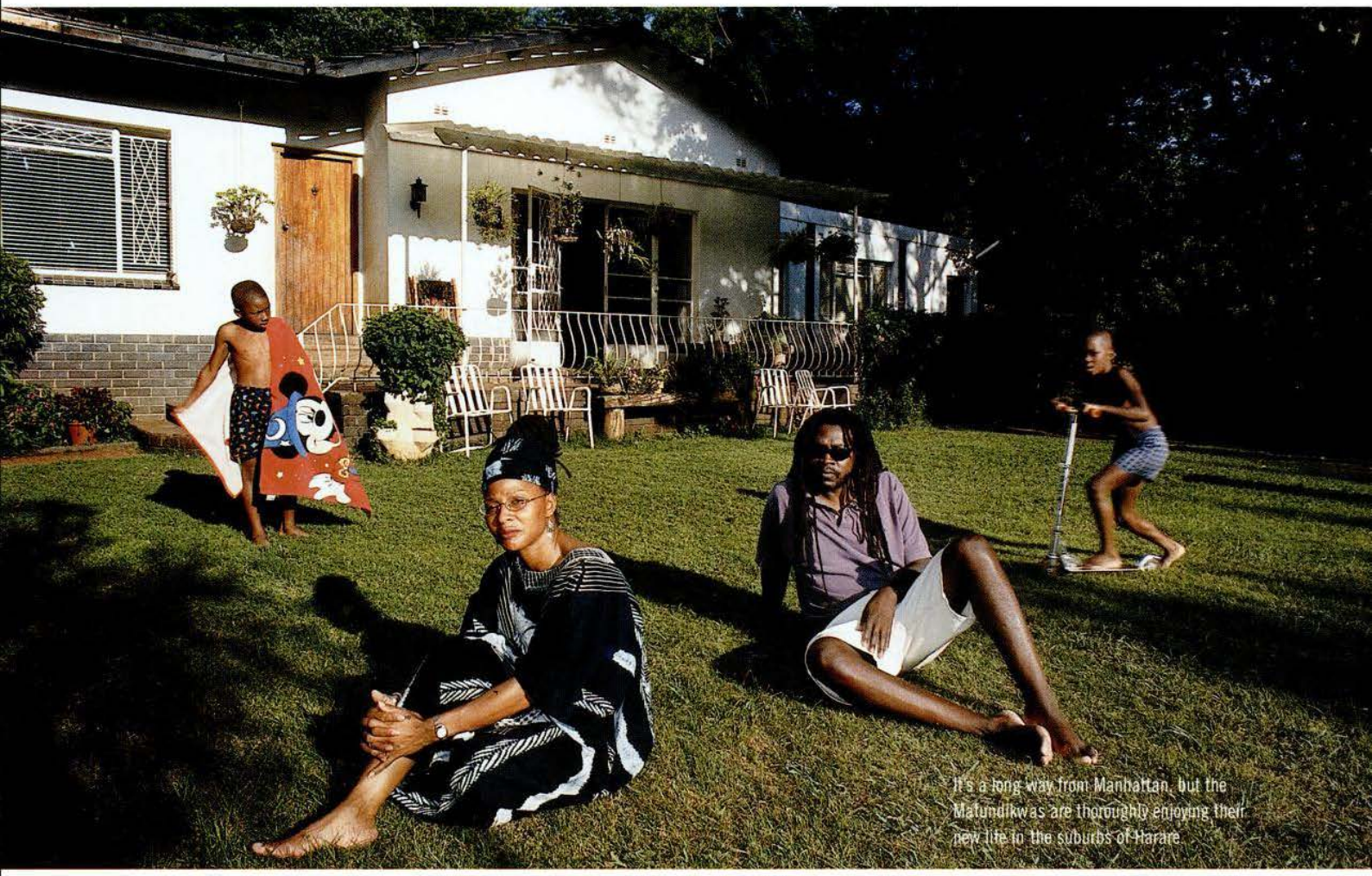
Bonnie: My favorite, favorite thing in the whole store is a dishwasher by Fisher & Paykel. It is beautiful . . . it has a curved front and is aluminum so it is attractive-looking. But then when we opened it up, we realized that it has two drawers—so you can run one of the drawers independently of the other, which we thought was really good because with only two of us, we never have enough for a full load.

Hugh: It is good for singles and it is also good for people who can't lean over—you know, the heavy door concept and that whole thing. Basically, you have a drawer so you just slide it out.

6 50" Plasma TV **$20,399.98**
by Pioneer

Bonnie: They were playing a DVD of *Jaws* on this thing. The first time we were there I thought, Wow, the color is really amazing. They had another one playing *The Wizard of Oz*. We just stood in front of those two TVs and the depth and the color were just amazing. With these plasma TVs you walk by and you just stop and stare. I felt like a movie from the '50s where people are watching TV from the outside of the appliance stores. But it is a different TV experience, like nothing you've ever seen before. But we realized that price-wise it is probably out of the realm of the ordinary television viewer.

Hugh: *Jaws* was just really cool. It's still scary after 25 years. ■



It's a long way from Manhattan, but the Mafundikwas are thoroughly enjoying their new life in the suburbs of Harare.

SAKI RETURNS TO ZIMBABWE

Harare, Zimbabwe, is an African capital of about two million, a city with an ever changing skyline of modern office blocks and medium-sized skyscrapers. Loosely translated, Harare means "the one who never sleeps." It's fitting then that the city is home to Saki Mafundikwa, a teacher, typographer, and graphic designer with seemingly boundless reserves of energy and ideas. After two decades in the United States, first studying graphic design and then working as an art director in New York, Mafundikwa moved back home to Zimbabwe in 1998 with his wife and two young children. Upon his return, he founded the Zimbabwe Institute of Vigital Arts (Mafundikwa's term describing the teaching of visual arts using digital tools)—the first college of its kind in the country—with only "a few Macs, a modem, the goodwill of friends, the support of my wife, and bagfuls of guts and dreams."

We spoke with Mafundikwa about life in Harare, the school he founded, and his hopes for his country.

What brought you to this neighborhood? What are its advantages/disadvantages?

The advent of the Web and my boys turning six and four were two events that accelerated our move back home to Zimbabwe. If I had delayed it, my sons would have become Americans and moving them back would have been difficult. I wanted them to have an African identity.

We live in Greystone Park, a suburb of Harare. It is a scenic, hilly area with streams running through it that makes it a nature lover's dream. It is a perfect place to raise two young boys. Our house is quite near their school, but the disadvantage is that it is not near anything else. You have to drive everywhere, even to buy a bottle of milk, and the nearest shopping center is quite expensive.

What made you choose this house? What do you like best about it? Least?

Most houses in Harare are very plain and boring but this house reminded me a little of Paul Rand's house in Westport, Connecticut—very simple and functional. I love the spaciousness of it—we have four bedrooms and three bathrooms. What I like the least is the kitchen. Whoever designed it does not like to cook!

Once Tichakunda and Simba saw the pool, they knew this was the house for them.

PHOTOS BY DAVID BRAZIER/WIDEANGLE

Describe your daily routine.
On the days I teach, my day starts at 7:30 A.M., when I take a shower, get dressed, and drink a glass of orange juice and then leave for school, which is a 20-minute drive away. I teach from 9 A.M. to 4 P.M. I get a light lunch, usually eaten in front of the Mac. When an evening class is in session I hang around to catch up on the administrative stuff that sometimes falls through the cracks. I then stay at the school answering and writing email until after 10 P.M., when I go home for a late dinner. I am never in bed before midnight.

Is it more typical for you to eat out or entertain at home in the evenings?
My wife and I love to cook and entertain at home. Marie-Laure is from Guadeloupe, the French West Indies, and is the best darn cook in the whole *monde*. Everyone loves her Creole/French cooking, and people look forward to our get-togethers.

Why was it important for you to return to Zimbabwe? Why is it important to have a design school there?
A lot of people do not understand what I do—they cannot pin down "design." It's not that different from the States, really. I mean, it is better now, but I still get people asking me what exactly design is. I am quite a novelty here: a guy who left home, went to America to study art, of all things, seemed to be doing well in New York, then decided to return home voluntarily to start a design school. To be honest, a lot of parents send their kids to me because I have computers.

But I decided that only a school could enlighten our people. By exposing them to the richness of what they have. To show them that they can be a part of the so-called global village where you become a netizen by forwarding something new and unique to the other villagers. Folks want the new, the different, and there is an acceptance of the different among the villagers of the globe. I know what is in Zimbabwe and Africa, and I want to share that with the world.

—ALLISON ARIEFF

Rockefeller Center's roof gardens, designed by David Hosack, were part of architect Raymond Hood's vision for the complex. He thought that the gardens would serve as "viewscapes" for office workers on higher floors and that higher rents could be charged for a glimpse of greenery. Hood was onto something. Even a modest roof garden can add monetary and aesthetic value to your building (and a bit of oxygen to the atmosphere).

THE OASIS UPSTAIRS

Tar Beach, it used to be called, back in the days when "Up On the Roof" wafted up from a thousand transistor radios and folks climbed their fire escapes to sun by day and smooch by night and the only thing growing amidst the tangle of aerials was "a rose in Spanish Harlem."

That was Then. In the design-conscious Now, however, a baking expanse of naked tar paper is no one's idea of an oasis. To help us escape the daily chaos of city living, dwell asked four experts how to create one's own private Eden on a rooftop or terrace. The answer in four words: with care and forethought. As David Protell, maestro of New York's Chelsea Garden Center, says, "In an urban environment, it's about a lot more than just plunking down a tree in the front lawn."

Indeed. An array of issues must be addressed, foremost among them weight. "You don't want your roof to cave in and you don't want to cause leaks," says New York landscape architect Ken Smith. He recommends hiring a structural engineer to examine your roof and determine how great a load it can support.

Determining exposure is also critical, to both plant selection and decisions regarding shade 1. "The sun," says Los Angeles landscape architect Sasha Tarnopolsky, "can heat up a pot on its south side so intensely that the roots actually burn." And everyone speaks of the evils of wind. "People are not aware to what extent it dries plants out," says New York garden designer Jeff Mendoza. "If your roof gets a lot of wind, you have to compensate with more water- ▸

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ing." In addition, there are local codes that govern fire, parapet height, egress, weight, zoning, visual access, and even landmark preservation, all of which should carefully be checked.

Once you're certain you can have a garden, think carefully about what you want to do. "Live in and outside of and amongst the space," Tarnopolsky suggests, "so you understand where it is hot, where the shadier niches are, where you envision yourself spending time." Consider the values of the terrain. "What is it you don't want to look at?" Mendoza asks. "There's neighbors, or fire escapes, or all of these structural issues you don't want to see. So they have to get blocked, or you have to manipulate the eye away from them."

When in doubt, simplify. "Most people put out lots of pots of different sizes with different things in them, and it becomes this hodgepodge," Mendoza observes. Instead, says Tarnopolsky, strive for "a clarity of concept. Everything that's on a roof garden is very obvious. You have to think of every surface and object as something that's going to be seen. They should really work together."

Whatever your concept, it will likely include certain essential elements, the first being decking, to protect the roof membrane. Mendoza recommends SoftPave 2, a rubber tiling commonly used in playgrounds. Apart from creating a uniform surface, the 24" x 24" pavers "are raised up on a kind of egg-crate detail," says Mendoza, "which allows water to flow freely to the drain." Smith favors industrial fiberglass grating: "It's really strong and lightweight, plus it comes in plywood-sized sheets that can be carried through the house." And Tarnopolsky praises a recycled plastic molded to look like lumber: "In situations where you don't want to have to sand, seal, or restain wood, it's good stuff."

Apart from the imperatives of privacy and shade, Mendoza believes "a roof garden usually needs some sort of architectural structure to be really interesting." The classics in this regard are wooden arbors and pergolas; yet, as with decking, construction represents a chance to use the limitations imposed by weight, access, and exposure to think creatively. "We sometimes use very light metal structures," says Tarnopolsky. "Then we'll add a canvas awning on a cable, so you can move it and adapt to any solar condition." Screens 3, too, offer a range of imaginative possibilities. For one installation, Smith built them out of expanded aluminum—"I find it beautiful, because it patinas with age"—and he also likes corrugated fiberglass: "Because it's translucent, you get shadow patterns that are quite nice."

Not to be overlooked is lighting, which, Smith believes, "can give you the magic in a garden." "If you've got a roof-deck that leads out from your living room," Mendoza observes, "and you light it properly, it extends your sense of your interior space." Tarnopolsky suggests "suspending fixtures reminiscent of hanging lamps."

Time to shop for plants? Not until you decide what to put them in. "Go to a garden store and buy what they call 'rooftop soil,' " Smith counsels. "It's generally a mixture of perlite, humus, sphagnum moss, and vermiculite, and might be 50, 60 percent lighter than topsoil." Regarding containers, get the biggest ones you can handle. Small pots dry out too quickly. "You have a small container in full sun and wind on an exposed roof," says Protell, "and you'll go nuts trying to maintain it." Mendoza suggests a 36" x 20" container, with a 16-inch soil depth, as a good average.

When the moment for plant and flower shopping arrives, "start out slowly," says Mendoza, "with a few things you think you're going to like a lot. Look carefully at your space, and then figure out what plants will do well under those conditions."

Begin with trees, which, Protell believes, "are the building blocks for the rest of the garden. In terms of endurance, reliability, and flowering, crab apples 4 are a great terrace tree." Other recommendations include flowering plums, Japanese maples, and magnolias. Mendoza likes bamboo: "It's something you can use to block things from the eye, and it'll become a solid, tall plant form." In hot climates, notes Tarnopolsky, "fruitless olive trees are very drought-tolerant, wind-resistant plants."

As for shrubs, says Protell, "the sky's the limit—azaleas, rhododendrons, hollies. Junipers are also particularly good for terrace situations."

If you're looking for a vine to sprawl over your arbor, "wisteria, vitus, and honeysuckle (which also smells delicious) are our three main things," Mendoza says, while Tarnopolsky names Purple Coral Pea. You could also consider tall grasses such as miscanthus or liriope, suggests Mendoza. "They move in the breeze and they have a lightness and fluidity to them."

As for flowers, Protell—whose three-store empire includes an 11,000-square-foot garden center—names irises and peonies as two exceedingly popular perennials, and geraniums, marigolds, petunias, and pansies as top-selling annuals.

To get started, Protell suggests perusing *The City and Town Gardener,* by Linda Yang, followed by a trip to the Web. After that, first-time skyscapers should be as creative with flora as with more familiar design elements. Smith suggests attempting a tiny turf lawn, or even a tabletop-sized wildflower meadow; if something doesn't work, says Mendoza, "pitch it and start again." Above all, remain as flexible and dynamic as nature itself. "Don't feel bad or guilty or like you made wrong decisions," Tarnopolsky says. "Grow along with your garden and change and enjoy."

—MARC KRISTAL

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THIS IS YOUR GARBAGE

DuraCane

Acadia Board Company, Ltd.

Contents: Bagasse, (fibrous waste from sugar production), and PMDI, a polymer binder.

Use: Fiberboard—furniture, cabinets, laminate flooring.

Bonuses: Reuse of agricultural waste, with a formaldehyde-free binder.

Problems: As of February 2001, the company was producing grades B and C board and was three months away from producing grade A, the standard for residential constructions. According to Erez Steinberg of StudioEG, "The difficulties are sanding the face of the board to a smooth surface, and removing all the debris from the sugar cane, so it doesn't destroy cutting blades."

Price: $175–$265 per 1,000 square feet plus freight. Truckloads only.

In the U.S., we generate over 400 million tons of trash every year. Mountainous landfills spread, and stink. And trash becomes part of everyone's landscape (like chewing gum spots on city sidewalks). But environmentalists and shrewd entrepreneurs are using garbage, bought or salvaged, as a raw material for building.

Photographs by Michael Lamotte

Large images show materials at 100%.

UltraTouch Natural Fiber Insulation

Bonded Logic, Inc.

Contents: 85–95% post-industrial denim scraps, 5–15% synthetic fiber to add fluff, and borates for pest and flame resistance.

Use: Thermal insulation—denser than standard fiberglass and keeps out more noise.

Bonuses: No itchiness, no toxic fumes, despite starched cottony feel and boric smell. Reduces denim waste and uses less energy than fiberglass production. Nice shade of blue. As Liat Margolis, of New York City's Material Connexion, says: "It replaces the conventional material . . . and nothing out there looks like it. So from a design perspective, it is exciting."

Problems: The plastic fiber and borates aren't recycled.

Price: About 30% more than typical fiberglass insulation.

Trex Easy Care Decking

Trex Company

Contents: 50% recycled polyethylene from used grocery bags and bulk-grocery shrink wrap, and 50% recycled waste wood from furniture factories.

Use: Decking—private porches, public boardwalks.

Bonuses: Of all the grocery bags recycled in the U.S., Trex uses about half of them—approximately 2.3 billion per year. No splintering, no need for smelly sealants and stains. Resists insects, water, sunlight.

Problems: Scot Horst, Sustainable Materials Consultant for Horst, Inc., a 7Group company, asks: "Does the material recycle again? It would seem that both the reclaimed wood and the plastic are reduced to a lower value as material feedstock once they are combined in this composite."

Price: $1.95 lineal foot.

Concrete with High-Volume Fly Ash

Rutherford-Chekene Engineers, EHDD Architects

Contents: 50% fly ash, 50% cement.

Use: Building-walls, foundations.

Bonuses: Fly ash, produced in abundance by coal-burning power plants, replaces a high volume of cement, which is third on the top ten list for CO_2 emissions.

Problems: Rutherford-Chekene's structural engineer Afshar Jalalian, who created this mix for U.C. Berkeley's Wurster Hall seismic retrofit project, says: "The concrete dries at a slower rate; this is really not a problem but builders will need to adapt." Also, fly ash (a mixture of alumina, silica, unburned carbon, and metallic oxides) is extremely toxic, though it may be that the concrete immobilizes its impurities.

Price: For the Wurster Hall project, the bid was for about $13,000 less than those for conventional concrete.

Amazon Select Recycled Paint

Amazon Environmental, Inc.

Contents: Post-consumer, old, and sometimes dried-up latex paints.

Use: House paint.

Bonuses: Says Erez Steinberg: "This is a very important product. The dumping of unused paint is a huge environmental problem. The product resolves the issue of recycling paint by transforming it into a line of limited standard colors." Custom colors are also available.

Problems: It's still latex, and latex is gross—in the long term, alternative wall coverings would be a better solution. Exact shades vary from run to run, so order in bulk.

Price: $15 (two-gallon pail), $35 (five-gallon pail), $358 (55-gallon drum).

Icestone

Great Harbor Design Center

Contents: 83% recycled glass, 17% cement.

Use: Same as quarried stone—tiling, countertops, etc.

Bonuses: Recycles using material indigenous to the local environment, New York City (home to many broken bottles). Emission-free manufacturing. David Hess of Cesar Pelli and Associates says, "The cost promises to be 20% less than our estimates for high-quality quarried stone. The beauty, availability, and cost give Icestone a tremendous advantage."

Problems: According to Scott Horst, "Recycled glass tile is often better than standard ceramic, but it is important to understand that the environmental choice might not be tile at all."

Price: $25–$50 per square foot, varies according to color.

FlexShake

US Century, L.L.C.

Contents: Reclaimed steel-belted car tires with an external layer of ground slate.

Use: Roof shingles. Ground slate hides the tough steel/rubber layer and provides UV protection.

Bonuses: Getting rid of tires. In the U.S., 270 million tires (3.4 million tons) get thrown out every year. Liat Margolis describes the scene: "There are mountains of tires in Southern California where water gets trapped in the rubber and becomes a breeding ground for bacteria, disease, and mosquitoes."

Problems: Might be sidestepping the real problem, which is too many tires.

Price: $165 per square (in roofing, a square equals 100 square feet of roof coverage).

See the Green Page (pg. 94) for sources.

THIS IS YOUR HOUSE

Story by David Rothenberg

We approach the place from a path through the forest, the spruce trees covered with a light morning dew. There is mist in the air. The house emerges in a clearing, perfectly set on the rocks. It's clean and elegant, constructed entirely of local cedar and pine. This is Norway; the house is in a traditional hytte style, a woodsman's cottage, but with modern windows offering a panorama onto the fjord and the mountains beyond, perhaps the most beautiful view I have ever seen. Nature is all around, permeating the senses. Here in this house, with its perfect placement on the land, I feel I have arrived. **A real human home in the midst of nature.** All around me, architect Christopher Alexander's famous "quality without a name." What could be a better symbol for how we ought to live?

Something troubles me as we open the front door. "How come it's already warm?" I ask my host. "Oh," she says easily, "we just keep the heat on all year, even when no one's home. With all of our big hydroelectric dams, electricity is so cheap, you know. And it's so nice to come into a warm house on a cold day, *ikke sant?* Come on, you've seen the place, let's drive to the store. It's 40 minutes away and we have to get there before it closes."

Here it is again. The perfect mountain hideaway, but just another excuse to get in the car! **The temptation of convenience, the ease of freedom.** To escape to wherever you want, to design a way into nature, and forget about everyone else. I think back to America, to my friends in New York City, asking my help: "Find me a place up there in the countryside. With absolute privacy and peace. I need relief from this town." I tell them I live in a village, Cold Spring-on-Hudson, where I can walk through town, down to the train, and stay out of the car. Life only seems green if I can walk, feel the outside air, go down the street and find people I know, and am also able to turn the other way and head into the forest and see no one. "You want green?" I say. "Think about people other than yourself."

Not to get pious about it. My family still has two cars. My house costs too much to heat. Like everyone else I do what is convenient before what is right. I only know a few of my neighbors, and my connection to the community is modest at best. Part of me dreams of the ideal house in the hills where the fire is always burning, the sky is always clear, and the wind-cleansed air is free of bugs. If society is so hopeless, then why not escape it, grow all I need right there, get off the grid like my California friends?

You still can't escape. As *Whole Earth Catalog* co-founder Jay Baldwin points out when he asks, "Where did you get your axe?," **we need the outside world to realize even our most isolationist dreams.**

Maybe life in the city is the answer. A movie star shows me his 6,000-square-foot duplex apartment in Tribeca. "This place, David, is beautiful. The floors are refinished pine reclaimed from an old industrial building in Buffalo. All the furniture's made from guaranteed sustainably harvested tropical woods. This whole building is super-energy-efficient, so it costs less to run and is a great example to the rest of the city. I'm putting solar panels on the roof, which still has space for a deck. Now which mirror do you like better, this one, which costs $15,000, or this one, which is $25,000?"

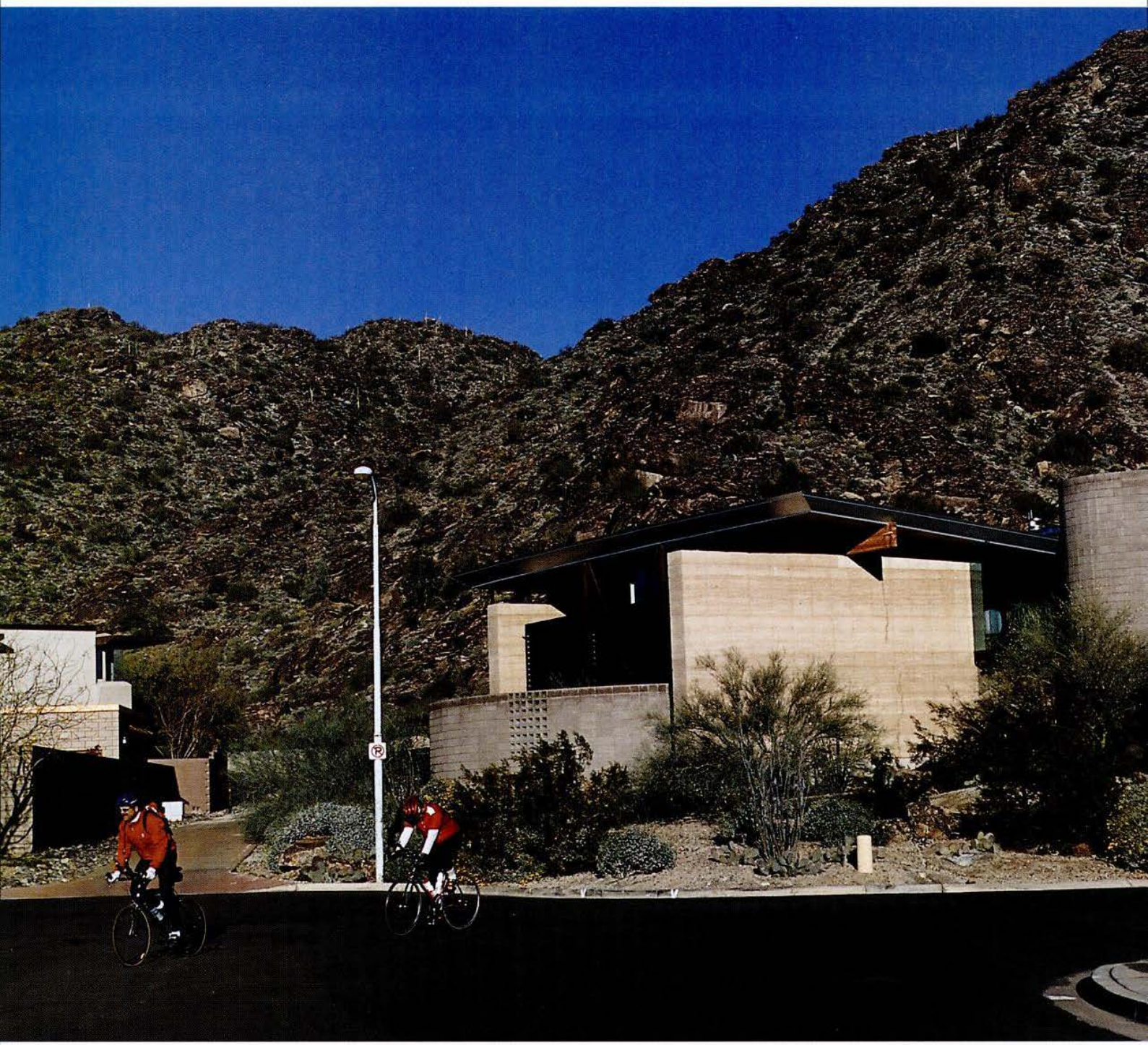
"Definitely go for the bigger one," I reply, remembering what critic Andrew Ross once wrote, that New York City is the closest thing to an ecological society he knows. You don't need a car and can walk just a few minutes to get anything you need any time of the day, and people have quite small (usually) private spaces but a large and rich shared public space.

Way uptown, in the wilds of the South Bronx, I know a few people who live in an abandoned building, the owner long gone with 20 years of back taxes on his tail. The city has tried to kick this group out quite a few times, but they keep coming back and now the police leave them alone, because of what they're doing there. They have a small community garden wedged between highways and abandoned lots, blossoming with flowers and full of potatoes and carrots in summer. In the forgotten, sad zones of the city you can almost live off the land. They have no central heat or electricity but warm the place by a woodstove. Camping out in an abandoned urban wilderness. They run an art gallery, host poetry readings in several languages, and support spiritual practices in their community. No one pays to live there, of course, but no one wastes time in the market economy, either. They serve the community, swim in the Bronx River, dream of a better city and country for all.

These pioneers, like Thoreau, who lived in early American suburbia just a mile from his mother's house, offer the strongest challenge to the system. Thoreau behaved differently from his neighbors—living simply off the land. If you do that in the city, you will bear a lot of dirt and pain, but you'll face your environment rather than fleeing its sickness.

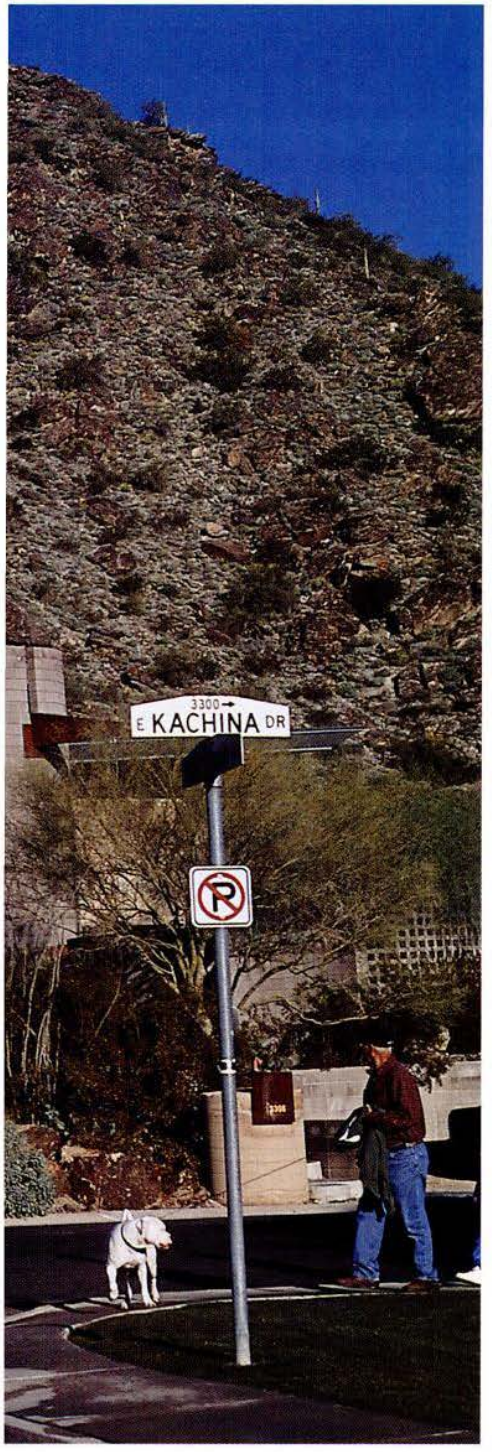
What is the greenest way to live, then, to survive in the concrete jungle or decamp to mountains and rivers sublime? The choice is yours. But your decision is connected to everyone else's. If you live and design ecologically, you will no longer be able to think for yourself. **The way you live affects the way everyone else can live.** City or country, staying put or getting the hell out, you can't honestly go it alone.

David Rothenberg is the author of Hand's End: Technology and the Limits of Nature *(University of California Press, 1993) and the editor of the Terra Nova book series on nature and culture, from MIT Press. He teaches environmental philosophy at the New Jersey Institute of Technology.*



HOUSE OF EARTH

Forget adobe. An elegant rammed earth home moves desert architecture in a whole new direction. Story by Lee Bey / Photographs by Terrence Moore



Eddie Jones and Lisa Johnson's rammed earth home rests at the foot of Phoenix's 16,285-acre South Mountain Preserve, the world's largest municipal park.

It doesn't rain very often in Phoenix. But when it does, the residents of Kachina Drive often head over to Eddie Jones and Lisa Johnson's house to watch the show.

Rainwater rushes from a steel scupper—it's sort of like a spout—which projects from the top of the house's cylindrical entrance. Water pours down a set of suspended silvery chains, into an open 18-foot semicircular cistern at ground level. The rushing water sounds like a muted waterfall. Most houses shoo away rainwater the way a host hustles a misbehaved guest out the back door of a dinner party: quietly and with as little fanfare as possible. Rain is routed to a set of gutters and, ultimately, down to the sewer. But through the scupper and cistern, the house on Kachina Drive slowly releases rainwater onto the property. Rainy days become special events and displays in sustainability.

"When we moved in, it rained and we ran out to see the waterfall," says architect Eddie Jones, who designed the home and owns it with his wife, Lisa Johnson, whose company, Corporate Interior Systems, Inc., helps businesses plan and furnish their offices. "Suddenly, people started coming out of their homes and applauding."

"When you're in this desert, it hardly ever rains," Jones says. "So when it does and you get your architecture to celebrate it, I think that's meaningful."

The orchestrated waterfall is quite spectacular and so is the two-year-old Johnson-Jones house. With its rammed earth walls, the 4,500-square-foot, three-bedroom home nestled near the trailhead of the 16,285-acre South Mountain Preserve is a smart working of color, texture, shape, and form. It offers a different take on the desert house. The line between indoors and outdoors is blurred, courtesy of Jones' use of windows, light, and a cleverly rendered entry court and side patios.

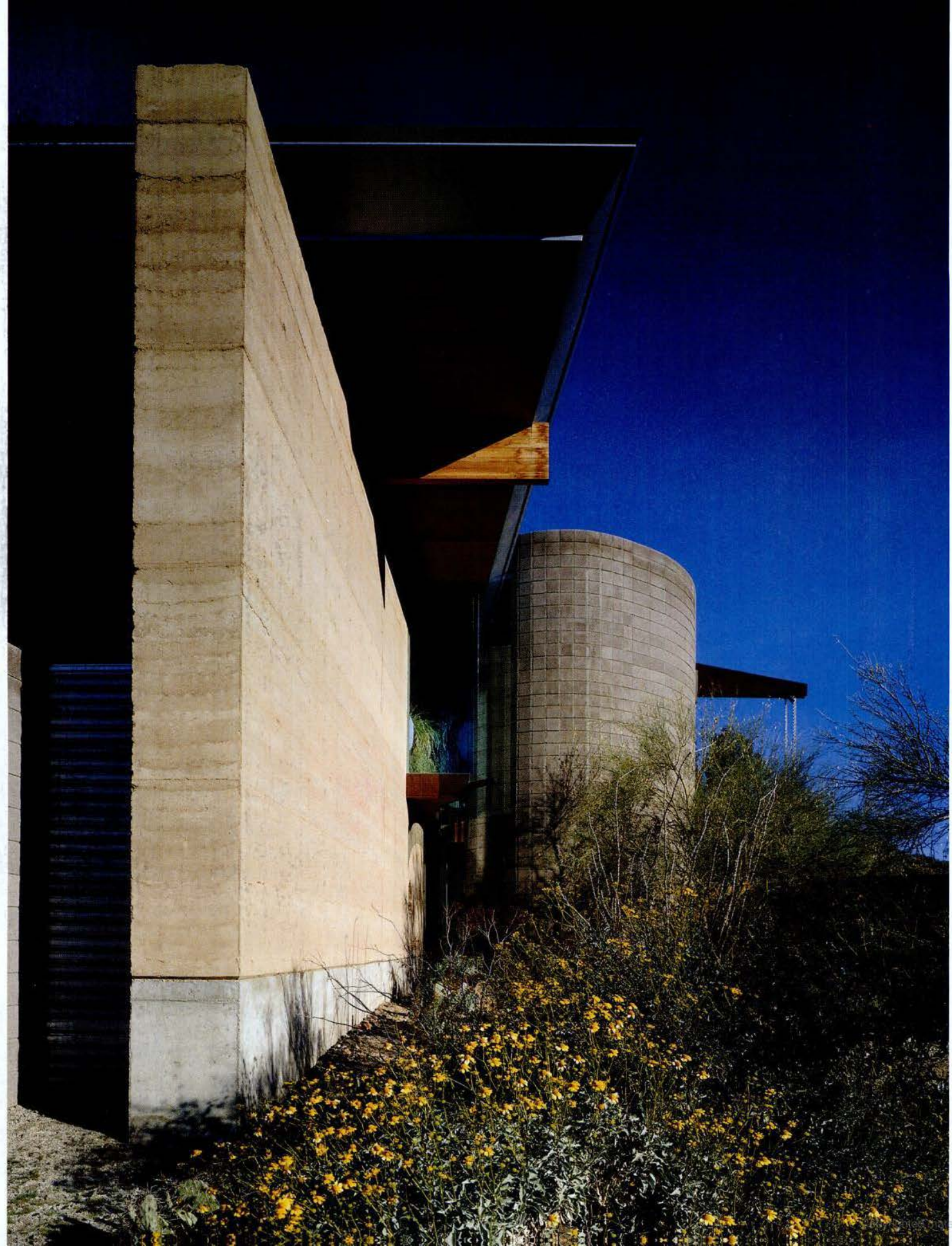
In a neighborhood where bright pastel-faced homes with colorful Spanish tile roofs represent what we've come to expect architecturally from the Southwest, the Johnson-Jones home is a real find. And Jones' innovative use of a green material—rammed earth—demonstrates that a healthy respect for the environment can produce some mighty fine architecture.

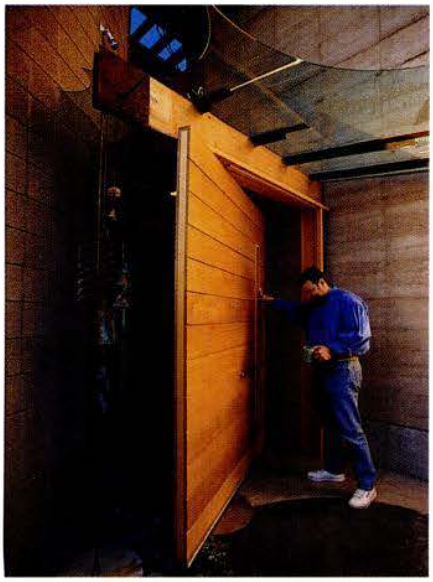
"How do you decide what a building looks like?" Jones asks. "Maybe if you're simply responding to nature, it looks like what it looks like and there is beauty in that."

Sitting close to the street, the house greets passersby with a series of circular forms: the cistern, the curved wall of the entry courtyard, and a tall cylinder that holds a winding interior staircase. The rhythmic circles were inspired by the only bit of ugliness that marks the site: a circular water chlorination tank built years ago by the city of Phoenix. The circular structure sits just beyond the rear of the lot, near the base of the mountain.

In Jones' hands, the tank becomes a design element. "It's like making friends with ▸

PROJECT: THE JOHNSON-JONES RESIDENCE
ARCHITECT: JONES STUDIO, INC.
LOCATION: PHOENIX, ARIZONA





The beautiful patterns formed by the striations of rammed earth are what first attracted Jones to the material. The house's pivoting oak door (above left) weighs in at 1,000 pounds. The glass canopy above it was inspired by Jones' travels through Germany, where he saw glass roofs and canopies everywhere. Its shape came from Jones' vision of a giant spider weaving a web. Jones' brother and partner Neal enjoys the private south patio (right) which has louvers that let sunlight in. The cantilevered bathtub visible off the second floor master bedroom is clad in raw steel.

something that could be easily construed as a negative," Jones explains.

When it built the tank the city of Phoenix raked the site clean. Tempe landscape architect Bill Tonnesen surveyed the rock patterns, flora, and vegetation of a 15-square-foot area of South Mountain, then recreated his findings on the land around the Johnson-Jones house. The result is a convincing approximation of a natural desert landscape.

But the home's most visible feature is its rammed earth walls, which were created from moistened dirt gathered from the site and packed down to rock-hard consistency. The unpainted, tan walls—18 feet tall and about two feet thick—are rendered smooth as stone by a process in which dirt is put into eight-inch lifts then compressed into tight, hard six-inch layers. That's it. No reinforcing bars. No reinforcements. Just a monolithic wall.

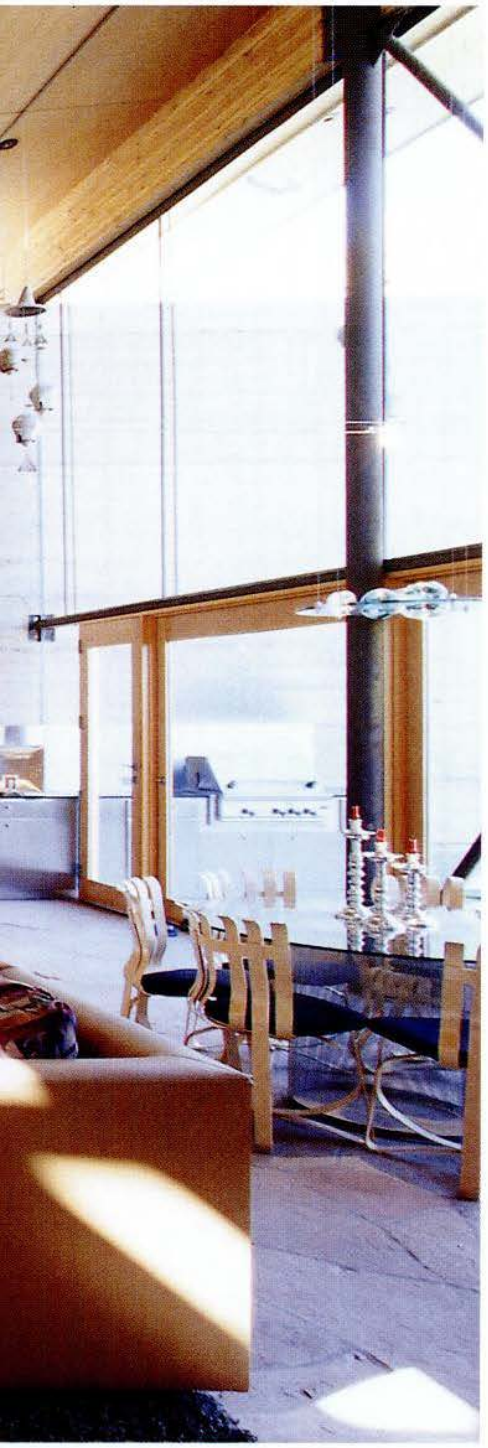
It's the ultimate in green architecture: energy-efficient walls made from the most natural—and most abundant—of materials. Jones, who previously designed a rammed earth housing compound on a ten-acre site for a client in north Scottsdale, was so enamored with the material that he decided to use it in his own house.

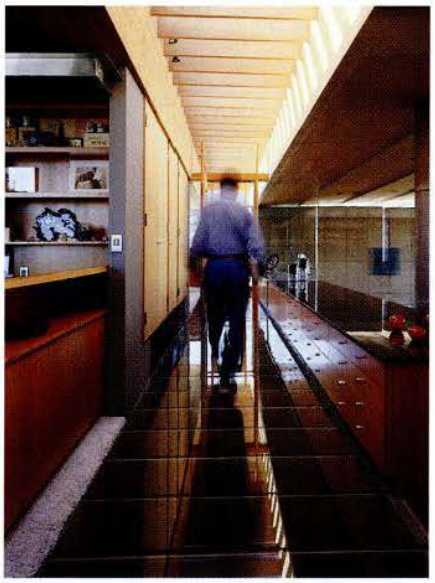
Rammed earth walls are not the only unconventional aspect of the Johnson-Jones house. The home, in fact, offers very little in the way of convention. There is a rammed earth mailbox near the street. The walkway is a pathway of sunken concrete semicircles; walking across them is like skipping across lily pads to the front door. A large front gate leads to a secluded circular courtyard with a small fountain and pond. Most of the ground cover consists of colored blue glass similar to that found in car windshields. The glass and the pond work together to absorb heat, making it feel significantly cooler than it does outside the courtyard.

"Pretend you're here in August—that's when you'll know you're in the Sonoran desert—and you've just walked through 120-degree heat," Jones says. "You enter this gate and you're in a beautiful garden . . . the temperature immediately changes once you come in here. You're surrounded by this special, non-arid landscape. There is the pond, the sound of water, the greenery . . . I like the contrast of it."

Inside, the house proves itself to be a spacious, livable abode for Jones, Johnson, and Johnson's two children from a previous marriage, Kurtie, 17, and Kara, a 20-year-old sophomore away at college. The couple has been married five years. Jones and his brother Neal operate Jones Studio, Inc., a Phoenix architecture firm that specializes in environmentally conscious design. The firm won acclaim in 1994 for a green model home it created for Arizona Public Service Company's Environmental Showcase Home in Phoenix. The 2,600-square-foot home was designed to be 50 percent more energy efficient than the typical dwelling, with features that include a passive solar design and carpet made from recycled plastic. ▸

The view of South Mountain through the house's 18-by-40-foot glass wall is spectacular but that doesn't stop the family from collapsing on the sofas to watch the big screen TV. Eddie credits Lisa with the design of the leather sofa and chairs, and the glowing coffee table made from a cylinder of perforated metal wrapped in fabric. At right, toiletries are magically transformed into light sculpture by the back-lit, architect-designed medicine cabinet. At far right, the hallway between the living room and kids' bedrooms has an integrally colored black concrete floor that amplifies the effect of the glass bridge above.





The Johnson-Jones family lives in Phoenix's Ahwatukee community. It's a comfortable area where in recent months homes have sold for sums ranging from $250,000 to over $1 million. Johnson, who has lived in Ahwatukee for 20 years, sold her last home, a stone's throw from the couple's current residence, to Arizona Cardinals defensive end Simeon Rice. The Cardinals' quarterback, Jake Plummer, lives down the street.

Jones, on the other hand, comes from Cave Creek, an enclave notable for its delightfully rough edges, full of "old hippies and all the old cowboys," he says.

"We wanted to have a home that Eddie and I could share," Johnson explains as she relaxes in the voluminous family room, where an 18-by-40-foot glass wall shows off a killer view of South Mountain.

"I never pictured myself living in suburbia, but then I fell in love," Jones recounts. "I fell in love with the kids and I couldn't haul everybody to Cave Creek, so I came here so we could start a life together. And build a house."

The couple's home seems to suit both personalities. Jones, with glinting blue eyes and his neat gray beard, is a sharp wit who speaks in details and with precision—and all those elements are evident in his architecture.

Johnson's taste and sense of style are reflected in the house as well. It was she who suggested making the family room larger by pushing the glass wall out six feet. She also nixed a planned concrete floor in favor of more tactile flagstone. Johnson chose much of the home's furniture, gracing the home with high-level furnishings that include bentwood chairs designed by Frank Gehry.

"With resources like Lisa and the Knoll catalog, you can't go wrong," Jones says.

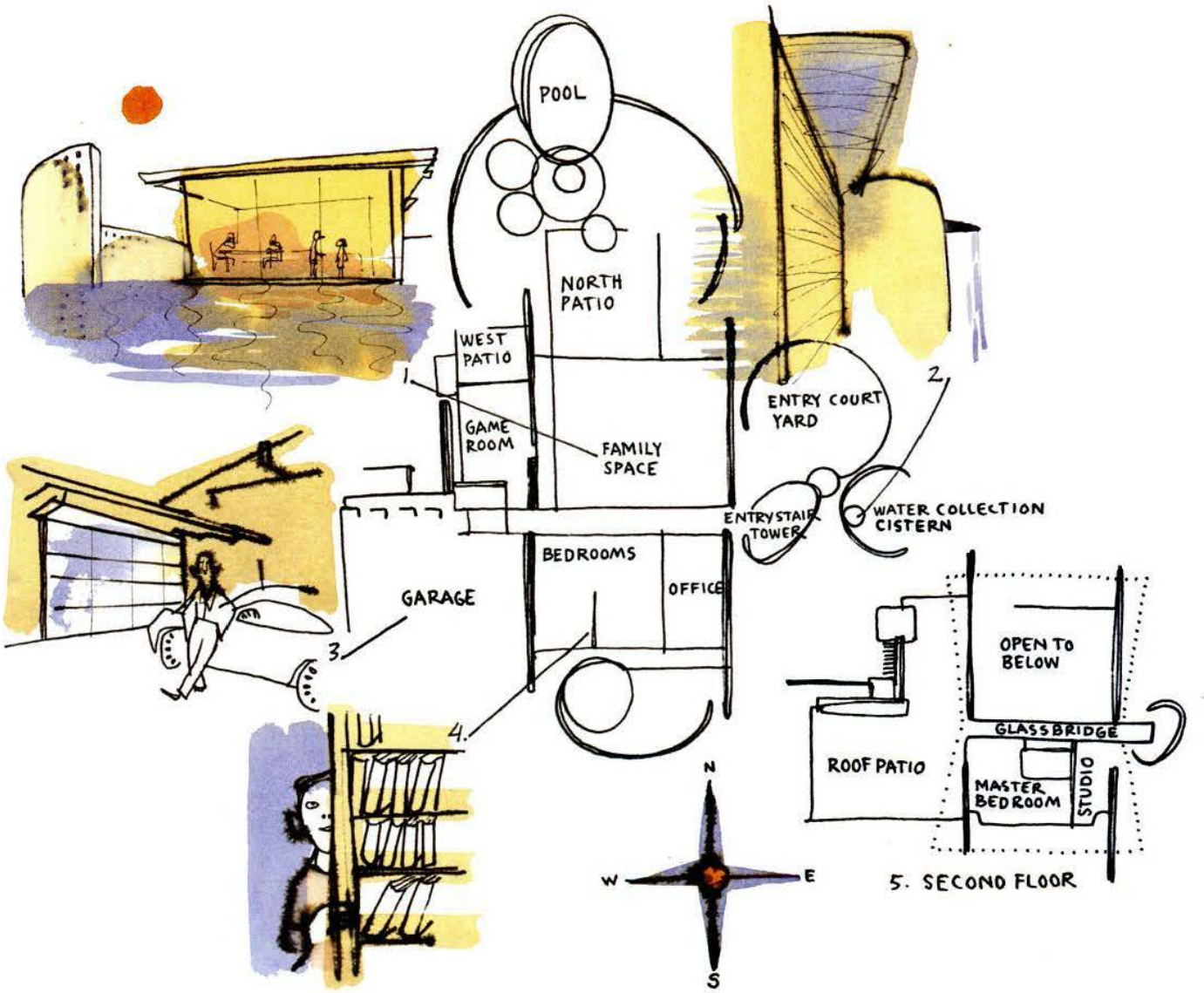
The heart of the home is the family room. The kitchen, entertainment center, and Johnson's grand piano share one single, great open space framed by two 18-foot-high rammed earth walls. The great room's north glass wall not only overlooks South Mountain, its glass doors swing out to the family's patio, hot tub, and swimming pool.

"This is stepping out for me to do something like this," Johnson explains, glancing occasionally out the big picture window as she talks. "I was raised in a regular home and always lived in regular homes. This was a different experience for me."

Kurtie and Kara's bedrooms and their work area sit across the hall from the family room. The three rooms overlook a south patio. Metal louvers shield the rooms from the blistering rays of the southern sun. Kurtie's room has an enviable feature: a bookcase lined with high school hockey trophies slides back to reveal—shades of Batman—a small, hidden room. It's about the size of a big closet, but it's a heck of a touch for a boy's room.

"I thought maybe he could hide *Playboys* there," Jones laughs.

Kurtie loves it, and the appreciative high-schooler returned the favor with a design proposal of his own. When Jones' plans showed the home would have an upstairs ▸



Rammed Earth

After fits and starts, rammed earth is catching on in the U.S. From the smartly designed modernist works of Tucson architect Rick Joy to the prowling, pueblo-like custom homes of Soledad Canyon Earth Builders, rammed earth is—for lack of a better term—gaining ground.

"We are indeed seeing more," says architect David C. Easton, founder of Rammed Earth Works, a Napa, California, design and construction firm, and author of *The Rammed Earth House*. "I don't see dirt competing with traditional housing but something's happening."

The chief material is cheap and plentiful, but building a wall of dirt is demanding, time-consuming, and up to 20 percent more expensive than traditional construction. Moist soil is poured into formworks in eight-inch layers, with each layer packed down with a hydraulic rammer before the next is applied. The formworks are removed and the walls harden. Clay soil is best but a wide range of dirt can be used, provided it is strengthened with cement.

Rammed earth has roots in this country as a low-cost building alternative—it was promoted during the Great Depression when conventional building materials were hard to get—but the technique's expense and the manpower it requires have priced it out of the reach of many. Easton, who has built several rammed earth homes, explains that rammed earth construction is mostly limited to expensive custom homes.

But there is a reward for the work and expense. The 18-inch-thick walls absorb a room's heat during the day, then release it at night when temperatures drop. This effect has appeal in the Sonoran desert, where temperatures surpass 100 degrees in the summer. But it's debatable whether rammed earth construction has any thermal benefit in colder climates. The Western Australia Office of Energy found rammed earth walls did a poorer job than typical wall construction of keeping houses warm.

But with rising home fuel costs and alarming electricity shortages, the benefits of rammed earth may call for further examination. —L.B.

ILLUSTRATIONS BY STINA WIRSÉN

Illustration: **1) Family space** The north wall of the family room is almost all glass. It opens up to the pool and patio and affords an exceptional view of the mountain. **2) Water cistern** The water cistern collects roof run-off from an outdoor waterfall. **3) Garage** Even the garage gets light. Jones used firehouse doors with translucent panels for the roll-up door. **4) Bedroom** Kurtie's bedroom has a touch of mystery. The bookcase slides away to reveal a small secret room. "I always wanted one of these when I was a kid," Jones says. **5) Stair tower** The neo-medieval stair tower leads to an upstairs hallway that has a glass floor.

This page: The pool at twilight is enclosed by concrete walls with a cylindrical shape that echoes the site's water tank. At right, Ginger the poodle surveys her territory from the tempered glass walkway on the second floor.

hallway—a bridge, really—with a glass floor, Kurtie suggested using transparent glass.

"I just thought it was a good idea," Kurtie says. And it is. A stair tower leads to the nearly invisible second-floor bridge. It's quite a sensation to walk across a see-through floor made of two pieces of half-inch-thick tempered glass laminated together.

"Most adults freak out, but the kids love it," says Jones. "Even if you drop a sledge hammer on it, you're not going to go through it."

Jones' design kept the glass floor from being a mere conceit. Topped by a long glass skylight, the floor lets a flood of natural light into the middle of house.

Natural light plays an important design role throughout the house. The sun pours in everywhere—even into the garage and the laundry room. The whole house abounds in great details. There are cabinet doors of vertical grain fir and maple doors. Medicine cabinet doors are opaque and backlit, so the colognes, perfumes, and liquid medicines artfully project their colors onto the face of the cupboard. The garage has a colored skylight and a very Alexander Calder–esque mobile designed by Jones that hangs over Johnson's Porsche.

Jones sketched out the house in virtually the form it was built. But making the drawing come alive was often trying.

"You have to worry about exceeding the budget," Jones explains. "If there was a rough spot for me, [it was] having to talk to Lisa about what things cost every day." And, adds Johnson, "The permitting process was really, absolutely ridiculous."

"It was hell," Jones concurs, adding there were often long delays in getting city approval for work, due in part to the city's unfamiliarity with rammed earth design.

Bob Goodhue, deputy director of Phoenix's Development Services department, said his department approves permits for rammed earth and even straw bale construction. But the city has to make sure "unique design challenges" meet code.

"The more complexities that are introduced the more time it takes to review," Goodhue explains.

The couple doesn't keep all this good design to themselves. They throw parties—the house has comfortably held 75 people, they say—and often give impromptu tours for neighborhood kids who ring the bell. People on the trails at South Mountain stop to take a gander at the house as well.

"I used to think, Oh, a house is a house; big deal," Johnson says. "But Eddie would say, 'No, a house is so much more. It should be an experience,' and he's right. Every day when you get up, it is an experience here. You see something different."

Especially when it rains.

Lee Bey is the architecture critic for the Chicago Sun-Times. *He was the recipient of the 2000 Studs Terkel Award and the 1999 American Planning Association Journalism Award for his writing on architecture.*

After 32 years in practice, Glenn Murcutt remains inspired by the Australian landscape, continually finding new ways to incorporate its rhythms into his structures.

STORY BY DAVID HAY
PHOTOGRAPHS BY STEPHEN OXENBURY

HOW INSIDE MEETS OUTSIDE

PROJECT: FLETCHER/PAGE RESIDENCE
ARCHITECT: GLENN MURCUTT
LOCATION: KANGAROO VALLEY, AUSTRALIA

Australian architect Glenn Murcutt designs houses that are all veranda.

Colin Fletcher, a first assistant film director, and his partner of 26 years, Annie Page, a writer, stopped dead in their tracks. I'd just mentioned how proud their architect, Glenn Murcutt, was that this couple's dream house in Kangaroo Valley could be completely dismantled, removed from its site without a trace, and its components reused. "The important thing is that the process of construction should always be a process of deconstruction," the Australian architect had insisted with characteristic passion. The Sydney couple, who had relished Murcutt's promise that their house would be "a gem," were hardly ready to hear that barely a year after its completion, the architect was relegating it to memory.

But Fletcher and Page soon recovered. They'd become used to the surprises that come with being a Murcutt client. Some have even been pleasant. Because he was working on other projects in this lush coastal region two hours south of Sydney, they didn't have to wait three years, like most clients, for the architect to take their commission. But then there was the day they arrived to inspect the foundation slab. "It was so tiny, we thought it looked like a house for midgets," the normally unflappable Fletcher recalls. "I freaked out and immediately rang Glenn." The architect confided he had a similar reaction to the slab on the first house he'd designed for himself.

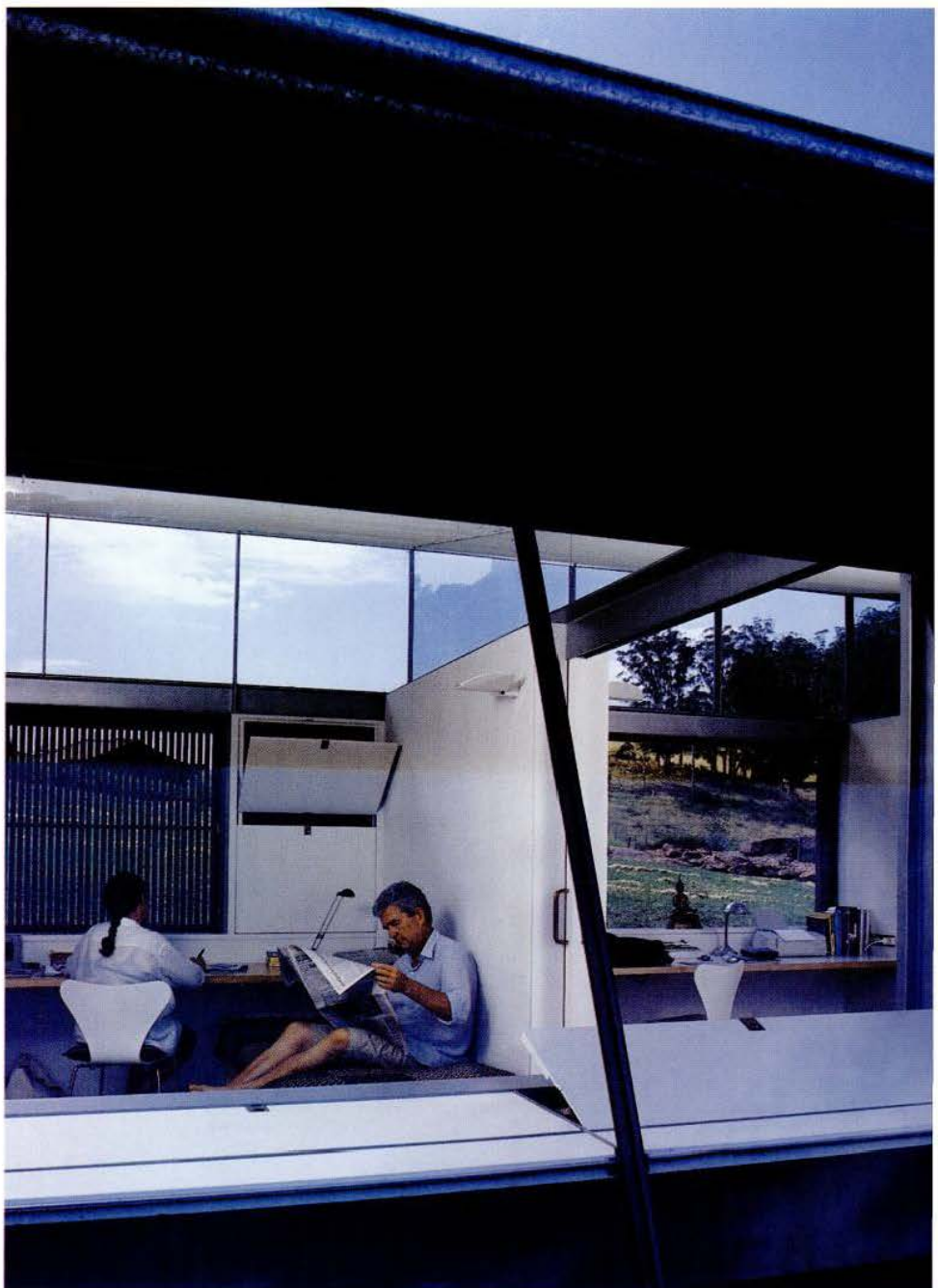
That the life of their house could be finite and its foundation slab so narrow should not have shocked this pair. It in fact follows Murcutt's belief that the environment is more precious than any structure standing on it and conforms to his practice of making "veranda houses." In his 32 years of practicing in and around Sydney, the 64-year-old Australian has developed a design process that increasingly draws from his deep understanding of the landscape. He fuses the tenets of modernism—its commitment to open, domestic spaces and the latest in materials—with the structural forms he sees in nature: everything from changes in climate to the branch patterns on a tree. But even with over 400 commissions under his belt, the architect is far from satisfied. As a boy in Australia, Murcutt was given ten shillings by his father when he asked a good question. He still feels the need to ask questions. "Remember," he warns, "any work that has been done well makes every subsequent one vulnerable." ▸

Many of Murcutt's trademark features are visible here. The floor-to-ceiling panel system on the south side of the house features three sets of sliding doors to accommodate the full range of weather patterns. On a hot summer day, with flies happily absent, Colin and Annie pull every panel out of the way, gazing without interruption at the landscape beyond. The four corrugated iron tanks at the eastern end of the house serve as the sole source of water for the house, collecting the plentiful rainwater of Kangaroo Valley and funneling it to a storage dam below the house.

In person, the self-deprecating Murcutt is a dynamo. With gray, curly hair, he has filled out from his high school days, when he was a much-touted swimmer. (His first commission was a house for the Australian Olympic freestyler John Devitt). His mind works so fast that at times he can't keep up and he seems distracted. An irrepressible talker, Murcutt offers up dissertations on everything from the traffic patterns in the suburb of Mosman, where he and his wife, architect Wendy Lewin, mostly live, to the color of bark on a eucalyptus tree. (It's white in summer to reflect the sun, brown in winter to be warmed by it.) "He's like a big kid, he's so enthusiastic about everything," notes Page.

Twenty-two years ago Murcutt bought a farm at Kempsey, 250 miles north of Sydney. He had fallen in love with the area when he designed a house for an earlier owner of the farm, Marie Short. This commission was a turning point: his first home outside an urban area and the beginning of a lifelong experiment with the ubiquitous Australian industrial material, rolled corrugated iron. Now one of his trademarks, he often uses it as siding and on the roof, like at the Fletcher/Page house. When Murcutt is at Kempsey he typically rises at 5 A.M. to work on the farm. (He pulled a paralyzed cow from a bog two days before our interview.) By lunchtime, however, he's at his drawing table working on his designs. He thrives here because he is able to spend time contemplating the relationship between his two loves—nature and architecture.

"In the natural order of things, the closer you examine things, the better they become and the more beautiful they are," he asserts. Murcutt's particular understanding of natural order derives from the starkly primal Australian bush. Tortured by harsh summer sun and bone-chilling cold in winter, and further subjected to thousands of years of burning off by Aboriginal people, this scrubby landscape couldn't be farther from the lush pastures and dense forests of the Northern Hemisphere. But its sparseness means that one can always see through an Australian landscape. The clarity of light on the continent also helps. "In North America, low light levels often connect the elements ►



(Above) Annie and Colin relax in one of the two adjoining studios. Sliding doors between the two, as well as the door to the garage, help keep the open, airy feel of the space intact while still providing privacy and quiet when necessary. The multiple storage spaces that line the base of the windows ensure that the work areas remain relatively clutter-free and Jacobsen chairs ensure comfort. (Opposite page) The large stainless steel kitchen counter, designed by Murcutt, is ideal for food preparation.

in the landscape," maintains Murcutt. "Here light separates them." The architect insists on incorporating this "great natural legibility" into his houses. They can't be solid forms if they are to fit into such a landscape—they, too, must be "legible."

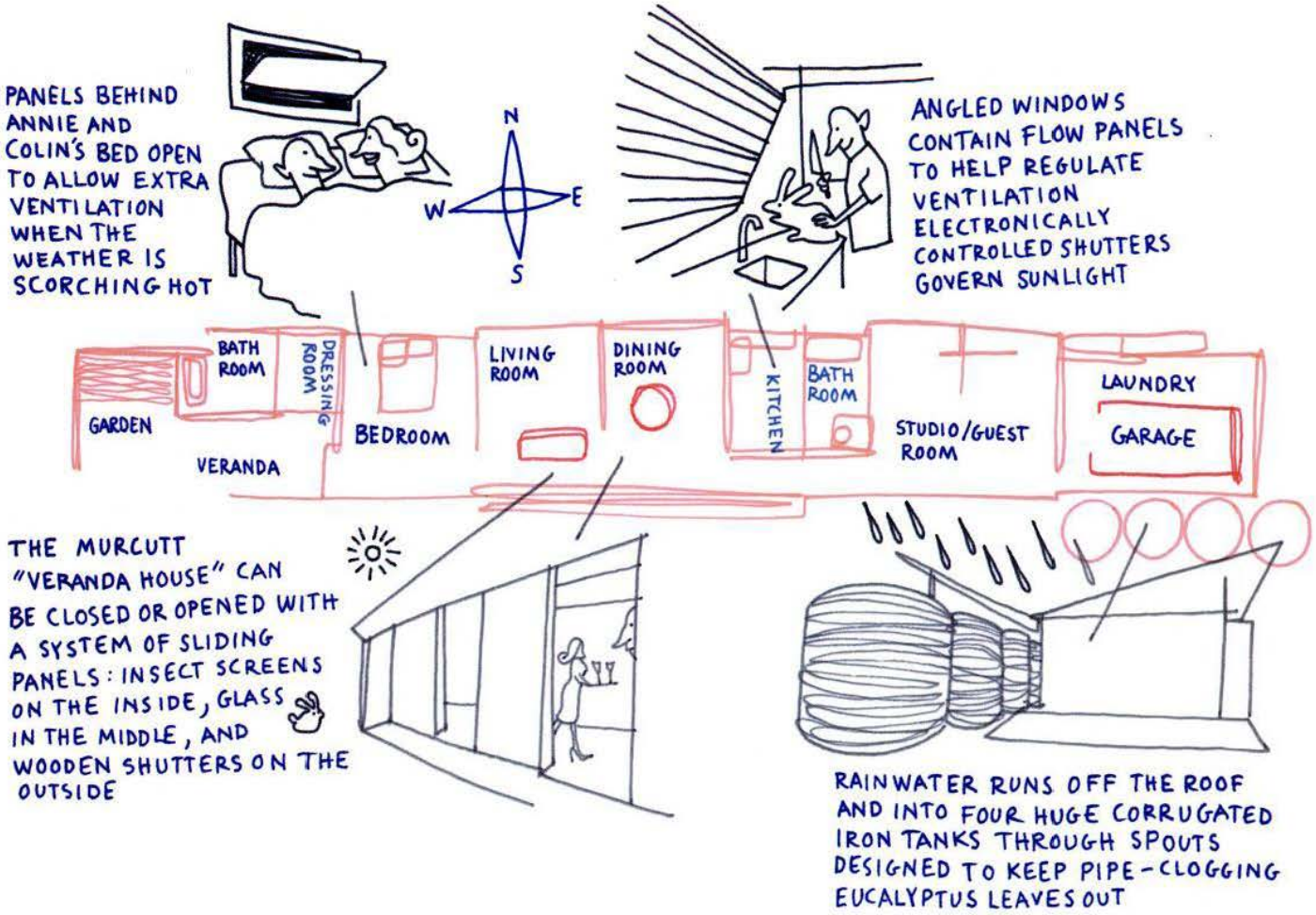
Standing by the dam below the Fletcher/Page house, I'm reminded of Murcutt's philosophy. Thanks to the placement of the windows on both sides of the house, I can see straight through to the clouds beyond. The effect is such that I wouldn't be surprised to see them float through the house.

But Murcutt is not simply interested in nature's broad strokes. He draws inspiration from the most common small object in the Australian bush: the eucalyptus leaf. "Most are very thin," he observes. "They hang down, putting their edges to the sun, and in the most stressed parts of our climate, these edges track the sun during the daytime to reduce transpiration."

This complex response tells Murcutt that a house needs to react to light and heat with equal flexibility. In siting the Fletcher/Page house, he studied contour plans, wind patterns, and rainfall charts and plotted the path of the sun. He then positioned the slab, and subsequently the windows, to take optimum advantage of the sun in winter, while at the same time devising ways to keep the summer sun away from the windows.

Since building the Kempsey house in 1973, Murcutt has worked in many parts of Australia, from the Aboriginal communities of Yirrkala in the Northern Territory to Broken Hill in the middle of the country. Although nature-responsive, his design process remains grounded in modernism,

The airy living room is ideal for an afternoon spent reading the paper. The angled windows in both rooms feature airflow panels that can be opened during rainstorms. Electronically-operated shutters keep out the summer sun.



albeit "modernism with questions." As a teenager in Sydney, Murcutt fell in love with magazine photographs of Mies van der Rohe's Farnsworth House. Over a decade later, his early houses were elegant, steel-framed-glass exemplars of modernism. In 1973, he visited another house that had equal impact: Pierre Chareau and Bernard Bijvoet's 1931 Maison de Verre in Paris. Their use of industrial products from the period persuaded him to become more flexible about using contemporary Australian equivalents such as corrugated iron.

Murcutt further extrapolated on modernism's belief in the open configuration of domestic space with his veranda houses. In Australia, colonial homes—modified versions of English homes of the period—were given one unique addition: verandas. Murcutt calls them "mediation spaces." "They reduced the glare between the inside and outside, and they helped in the transition of scale between the vast, wide outdoors and the often dark, cramped interiors," he says. With widths up to 15 feet, the verandas proved to be wonderful social spaces, a place to have a cup of tea, a drink, even a party.

Murcutt loved this social function—it matched his fondness for the easy Australian lifestyle. So he decided to move the whole house onto the veranda. This gave him great flexibility with the floor plan—"I could modify it any way I liked"—and it created a design with increased opportunities for utilizing the elements. Light, heat, and air become the allies of comfort, not its enemies.

Sitting in the living room at the Fletcher/Page veranda house, the sense of "in between-ness between house and land" is striking. During the first two years Fletcher and Page owned the land, they often camped there. They loved it. "You open the tent in the morning and it's a wonderful feeling being so close to the ground," says Fletcher. "The house feels the same."

The long, narrow floor plan also allows Fletcher and Page to readily welcome the best parts of nature—light, perfumes from the bush, and air—into their home. "And it all feels so comfortable," notes Page proudly.

The small scale and location of Murcutt's work keeps him outside the mainstream, even in his own country. But with a plethora of international awards coming his way, others are recognizing his pioneering vision. Murcutt seems quietly pleased but nothing warms his heart more than a letter from a client. "You must come up here and sleep in the living room," Marie Short once wrote him from Kempsey. "Then you'll experience how the moonlight comes in and floods the room." Murcutt won't admit to overlooking such a design coincidence; he maintains ▸

ILLUSTRATION BY STINA WIRSÉN

that "if you get the basics right, a whole lot of by-products you never thought about will flow from them." But he still loves the idea.

Living in a Murcutt

Like the eucalyptus that bears many of Murcutt's favorite leaves, the 1,400-square-foot Fletcher/Page house is full of features that twist and turn to make the best of the wind, rain, and sun. Keeping abreast of all this requires some skill, even artistry. Fletcher says, "It's like trimming the sails on a ship to get the best performance out of this house, making sure the breeze is right and the light is where you want it."

When it rains, Fletcher and Page head to the windows that angle outwards on both the north and south sides of the house. Between the bottom of each window and the wall, a panel lifts up to allow air in. "If it's raining and there's wind, it's hard to have a window up," says Murcutt. "With these windows, the water drops off the glass pane and air can still flow in." For scorchingly hot summer days, the house is lined with discrete, small panels, which, when pulled back, reveal first an insect screen and then a slatted opening to the exterior wall. Two such panels sit behind Fletcher and Page's bed. When it's hot, they reach up behind their pillows and open them, allowing a gentle breeze to enter.

Equally numerous are the ways in which light can be regulated. Murcutt loves for his interiors to have the same dappled shade that falls on the sparse Australian bush. Power blinds rise up behind and across the angled kitchen windows as well as the wide floor-to-ceiling ones in the living area. Murcutt's deft use of materials helps to create a comfortable climate inside the house. In summer the walls—timber on the outside, then insulation, then brick on the interior—resist the transfer of heat. In winter these same walls retain the heat from inside.

There's a steel fireplace, but a lot of heat rises from the floor heating system. Atop the 150-millimeter-thick slab, which sits directly on the earth, is a 20-millimeter-thick layer of Styrofoam. Murcutt then added a layer of electric heating cables, which send the heat upwards into the floor of the house, an 80-millimeter concrete slab. "You can keep the heat on very low, hardly using any energy, and that heat, combined with the sunlight, warms the house easily," he maintains.

Fletcher and Page's house has its own water supply, thanks to the run-off from the roof stored in four corrugated-iron tanks. To keep this rainwater free-flowing, the architect equipped the house with wide, upside-down cones atop every downspout. "Eucalyptus leaves vary from about 100 millimeters to 250 millimeters," notes Murcutt. "You only need about ten of them to truly block up a 100-millimeter downpipe. Under my system the truncation at the top is greater than any eucalyptus leaf can be."

He designs his downspouts to stop three inches above the ground, where a grate catches the leaves. "Then the wind can blow them away," he notes. With so many design features to be monitored, one might expect life inside this house is a busy one. Quite the contrary. "It's very restful here," says Page.

Much of this ease can be attributed to the uncomplicated ways the rooms flow into each other and the simplicity of the interior planes: the white brick walls and the polished concrete floors. One day Page mentioned that she'd be hanging two tiny Bose speakers in the living room. The architect replied, "Oh no, that'll create shadows." He then made two indentations in the wall in which to squeeze the speakers. But hiding the house's many functional systems was not easy. For the local builder hired to construct this $200,000 house, the complex design proved almost too great a challenge. It took him 22 months to complete every detail, a drawn-out process that confounded the normally patient Fletcher. "I couldn't talk to him in the end," he confesses. "I left all that to Glenn."

Now those stresses are a distant memory and living in Murcutt's creation is sheer pleasure. "We wake up early because of the light," notes Fletcher. "Then we lie in bed with a cup of tea and look out to all the trees and the sky. It's our favorite thing to do."

David Hay writes about the impact of design on our daily lives. A playwright and journalist, he lives in Los Angeles.

The front and back doors emphasize Murcutt's minimal approach and promote ceaseless interaction between indoors and out.

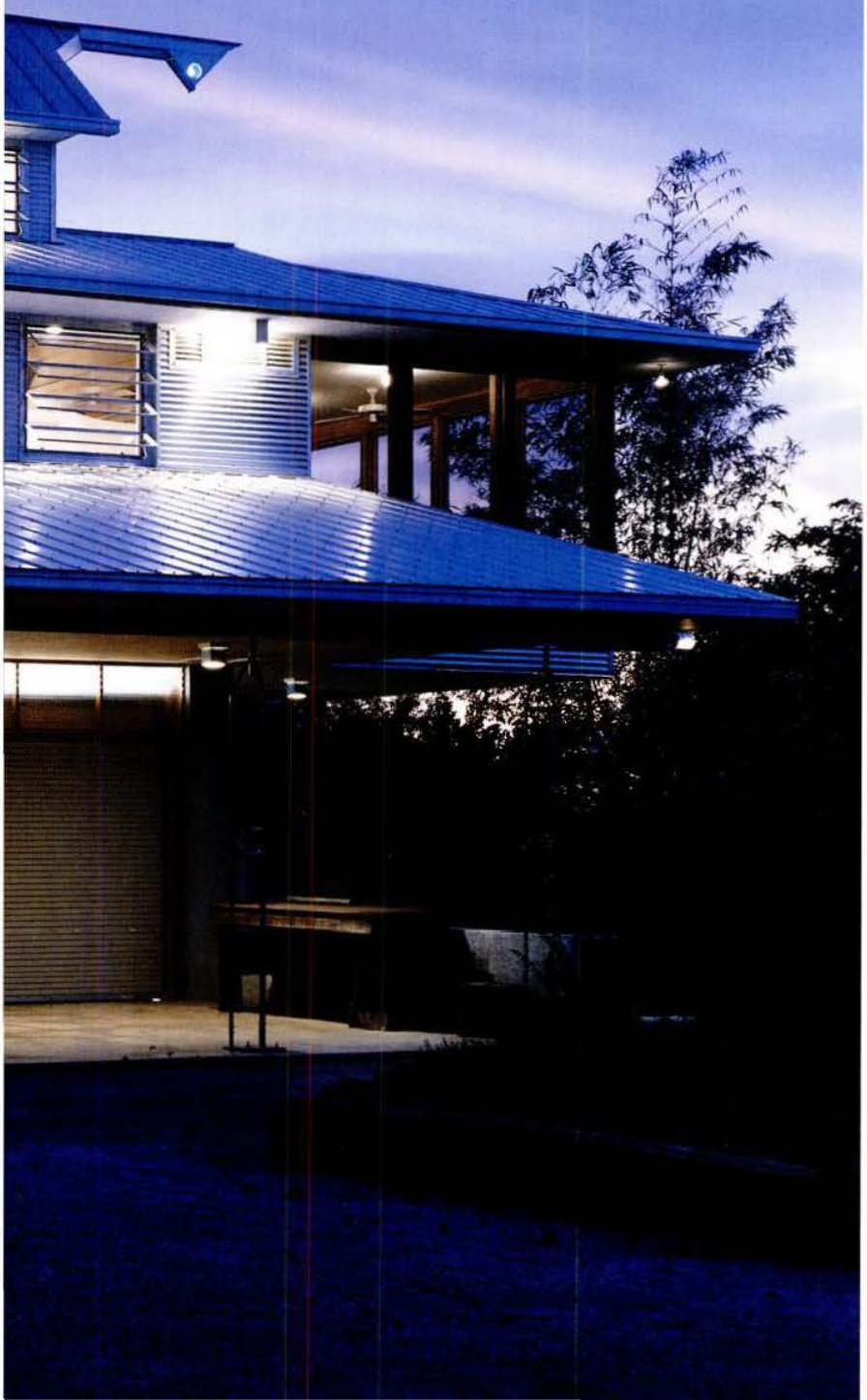
(opposite) Annie and Colin take in the sun and the news outside their house, relaxing in their Sling chairs. Enjoying the paper outside is, in this case, not much different than enjoying it in the living room. Murcutt's sleek, angled roofline, designed to encourage rainwater to spill into the tanks, is plainly visible. Just behind Annie is a set of adjustable shutters.

Straddling the boundary between the city of Miami and the Everglades, Jersey Devil's Palmetto House, originally designed for a woodworker and writer, provides an ideal escape from urban life. Rather than hiding its occupants from the extremes of the south Florida climate—torrential rains, heat, and the occasional hurricane—the house embraces and uses the elements. Behind the roll-top doors lies Jersey Devil Jim Adamson's first floor architectural workshop. The third floor loft was developed as a writing studio, and thus the second floor living quarters act as a buffer between the two work areas.

MIAMI MURDER MYSTERY?

STORY BY JOHN LANTIGUA
PHOTOGRAPHS BY BILL SANDERS

Nope. Not here. The wide open design intended to promote ventilation and eliminate the need for air-conditioning also deters crime. At least that's how our correspondent sees it.



PROJECT: PALMETTO HOUSE
ARCHITECT: JERSEY DEVIL
LOCATION: MIAMI, FLORIDA

If you write suspense novels, which I do, you quickly form a prominent impression about Palmetto House: It would be a mighty difficult place to murder someone.

Surrounded by Florida jungle, on the edge of the Everglades, the house is certainly isolated enough. The neighbors would see nothing. The only real problem would be finding a place inside to commit the crime and go unobserved.

The hallmark of this house is open space, including a bedroom with no walls, other rooms with only partial walls, and a loft that offers sight lines down into almost every ▸

Adamson (far left) and Amy Creekmur, Adamson's girlfriend (right), chat with friends in the kitchen/living room/dining room. The island, custom built by Jersey Devil, is the only feature delineating the kitchen from the rest of the house. The spiral staircase just beyond the dining room leads up to the loft that was once a writing studio and is now more of a reading studio. The studio's grated metal floor allows air to circulate unimpeded.

corner of the living space. A killer could easily be watched and heard at work.

This might be termed one of the safety features of the Palmetto, although it is clearly an inadvertent one. The design was a response to the distinct environmental factors of the site—especially the Florida heat—and also to the convictions of both the clients and the architects that the house should not contain an air conditioner. It is naturally ventilated and cooled, something almost unheard of in South Florida. In fact, given the climate, some Floridians would call such an architectural decision homicidal.

The three architects responsible are likely suspects for mayhem, at least on the surface. They met at Princeton University in the late 1960s and several years later began collaborating under the name Jersey Devil, derived from a New Jersey Pine Barrens legend about a child-eating goblin. They immediately began to cause trouble in the trade by designing only environmentally attuned, "green" structures and criticizing mainstream architecture for design that they say depletes the world's energy resources.

In addition, almost all their projects have been archetypes of a maverick design/build philosophy. They have poured their own foundations, framed houses, even put in the electricity and plumbing themselves—something that would make most architects pale, they maintain.

In the age of computer-aided design, the members of Jersey Devil are iconoclasts, provocateurs, and serve as a nagging conscience vis-à-vis the architectural profession and its relation to the planet.

As a novelist who originally planned on being an architect, I've often been struck by the similarities between the two professions. Of course, we both have a basic concern with structure, but there are other considerable connections. In the case of Jersey Devil, the members bring an evolved set of values to their projects, the way a novelist does to a book.

"When it comes to being green, and preserving resources, we are products of our era," says Devil partner Jim Adamson, 52, who today owns the Palmetto House and lives in a smaller dwelling on the same property. "We grew up in the late '60s and early '70s, when we all realized that the U.S. was energy-dependent on depletable resources. And one of the biggest wasters of energy is

the way buildings are built. I think everybody should want to do something that is interesting to look at architecturally but also functional on an energy level."

As far as their dedication to design/build, the three say they are opposed to the "ivory tower architecture" taught at Princeton. Their professors had many theories, although they didn't put them into practice. They rarely had buildings built and had never handled the materials from which buildings are made, assert the Devils.

But despite the name Jersey Devil, and their criticisms of their mainstream colleagues, Adamson contends that he and his partners Steve Badanes, 57, of Seattle, and John Ringel, 54, of Lambertville New Jersey, are not dangerous individuals.

"We're not troublemakers, we're ambassadors," Adamson insists.

Ringel is a bit less of a diplomat. "In fact, I'd say it's traditional architects who are dangerous," he says. "There was no grounding in ecology at Princeton. You graduated able to build make-believe buildings. With CAD this process can become even more removed from reality. In our day and age, building anything that isn't energy-efficient and sustainable is dangerous, just like people who drive big, gas-guzzling cars are dangerous. They're hurting me. Design/build is having feedback from the materials themselves. It makes for better, more responsible design."

Those values were the basis for the design of the Palmetto House (1987), one of more than a dozen Devil projects over the past three decades. The house is sheathed in reflective aluminum, constructed with deep, shadowy eaves and large screened porches at either end to allow southeasterly breezes to blow through. The design traps heat in the roof and walls before it can permeate the living space and expels it through a series of vents on the top two floors. The only cooling appliances found on the Palmetto's three levels are a dozen ceiling fans.

Like a novelist, who has to create a story that will accommodate real people, architects must construct a space in which bona fide human beings will live. In the latter case, they are specific clients. Over the years, Jersey Devil has almost always been contracted by individuals who share the architects' values and attitudes—especially about the environment. Adamson compares Devil clients to co-authors of a book.

"They tend to be people who think like us," Adamson says. "They have the same philosophy of wanting to be nice to the environment; promoters of the earth, as opposed to destroyers. In a normal architectural firm you get people with all different sorts of values. We don't."

As part of the design/build scheme, Adamson and Badanes travel from their far-flung homes and spend the life of the project in trailers on-site. (Ringel, who has family responsibilities, travels much less.) That brings them even closer to their clients.

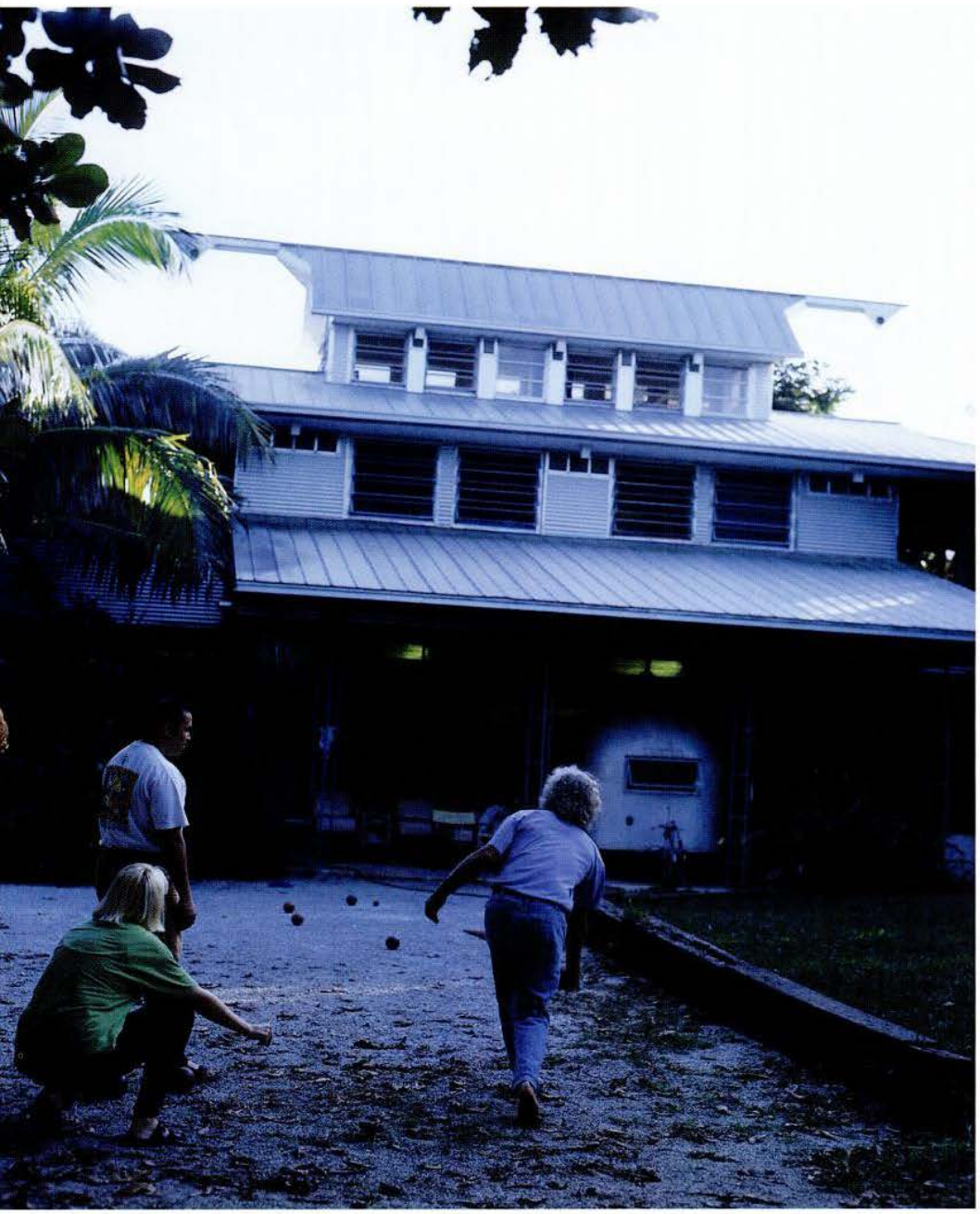
The Palmetto House was commissioned by Norma Watkins and Les Cizek. They lived in the house until 1992, when it was damaged by Hurricane Andrew, at which point Adamson bought it from them.

"Norma is a writer and she wanted a space to work and that became the loft," recalls Badanes. "Les is a woodworker and he needed a workshop and a place to teach, which he also does, and that is what you see on the ground level. In between, they wanted a living space that would separate their two workplaces." A novelist doesn't normally receive such marching orders, but the similarities resume the moment the architects act on those requirements. They need to do intense on-site research, the way a writer studies his milieu. In this case, what did they find? "We found that there were steady breezes blowing through here and we would want to take advantage of them to naturally ventilate and cool the house," Adamson says. "The higher you lifted it off the ground, the more breeze you got." So they decided to lift the living space and put it on the second floor.

They also discovered some very lush vegetation. At the time it included pines, but they were annihilated by Hurricane Andrew. Today a junglelike undergrowth, that has developed since the big blow, surrounds the house—bamboo, Brazilian pepper, avocado trees, etc. It is beautiful and provides shade, especially for the bottom level of the house, which is made of heavy masonry and stays quite cool. Once Cizek's workshop, today it is Adamson's. The property abuts a farm and you often hear roosters crowing. In addition to numerous dogs and cats owned by Adamson, his girlfriend, Amy Creekmur, and the current Palmetto tenant, Laura Pinto, untamed animals share the overgrown lot—squirrels, possums, owls, hawks, a ►

From top to bottom: The top of the staircase leading to the loft, where louvered windows line the walls. The bedroom is really only a cubbyhole off the main floor. When the weather is nice, the back porch also doubles as a bedroom. Adamson's first floor architecture studio provides ample space for this Devil to do his deeds.

Adamson takes a break and tries his hand at a game of boccie while Creekmur and a friend look on. Adamson's Airstream (a Jersey Devil icon) lies parked just outside his studio ready to move to distant worksites, such as this one in the Florida Keys (right).



rat or two, and some smallish snakes. But the main on-site discovery made by Jersey Devil, which helped them plot the project, was the local architectural tradition.

"We found the local vernacular architecture that had been dealing with the heat in this part of the world for a long time," Adamson says. "People called them 'cracker houses.' " Before the invention of air-conditioning, Florida pioneers built one-story wooden dwellings that employed broad overhangs to provide shade, the use of porches at either end of the building, or a wrap-around porch, and a design allowing the air to enter at one end and flow right through the other.

"The cracker house is an example of regionalism and also of sustainability," Ringel says. "Over hundreds of years people living in Florida developed this design, which, in this case, emphasizes shade and ventilation. It's worked well in the Florida environment."

But Jersey Devil's choice of materials made the Palmetto House something more. "It's like a space-age cracker house," says Adamson.

It begins with a corrugated aluminum façade and roof, that reflect much of the Florida sun, and which lend the house its extremely clean, angular look. The house also features water heated by solar panels, with the water circulated by a pump powered by photocells. Electric backup is available, although according to Adamson there is usually enough water tempered by the sun to meet the inhabitants' needs.

But the main space-age feature that Devil introduced to the cracker house is a ventilation system that uses radiant barriers to help dispel the heat from the dwelling.

It is when I enter the second-floor living space that—as a writer—I believe I've definitely found a prime example of what might be called the Jersey Devil style. All writers sculpt a style to their prose, and I assume that the partial walls that don't reach the ceiling, the open floor plan, have to be an example of style for style's sake. Not so, says the Devil.

"Style is not a question for us," insists Adamson. "It connotes that you have a preconception, a particular look in mind. We don't intellectualize. We build something that reflects the materials it is made from, the environment, and the clients."

Badanes agrees. "We don't have a style,"

he says. "We have a response to a set of problems, or circumstances. We like to think of ourselves as serious problem solvers, instead of cosmeticians." It turns out the bedroom without walls was the clients' idea.

"And it's true we often build interior walls that don't reach a ceiling," says Adamson, "but it has nothing to do with style. You're not going to have a naturally ventilated house if you have walls blocking the flow of air."

Another architectural anomaly is the floor of the loft, which is made of see-through metal grating, giving anyone on the third floor a view into most of the rooms below. Again, it allows air to circulate, permits light to filter through, and gives the entire living space a large, light, airy ambience.

In the end, like a writer, architects have to face the critics. Years ago, the *New York Times* architecture critic Paul Goldberger accused Jersey Devil of resorting to gimmicks in their work. The members of Devil don't think much of Goldberger, who they figure is a pawn of traditional architecture.

"We consider it an honor to be panned by the *New York Times*," says Adamson.

The critics to whom they do listen are people who have inhabited the house.

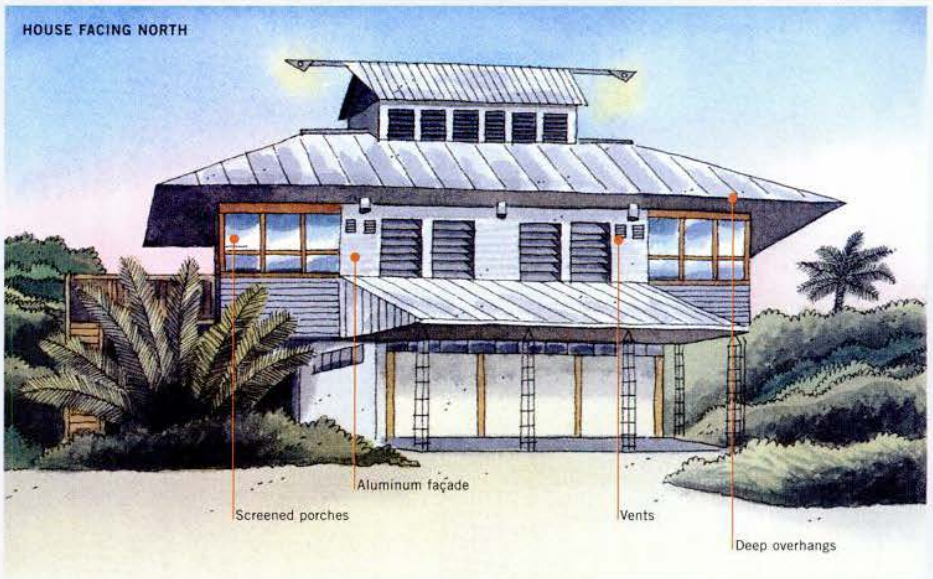
"It was a wonderful place to live," says Norma Watkins, who co-owned the Palmetto from 1987 to 1992. "The design worked amazingly well. It really did attract the prevailing breezes. It wasn't like air-conditioning, but the ceiling fans worked real well. At night it cooled off, and before dawn you had to cover up."

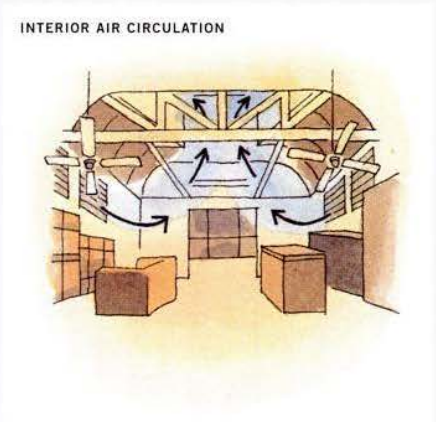
Creekmur, who moved into the Palmetto House with Adamson post-hurricane, recalls the beautiful sunrises and sunsets that could be seen from the elevated living spaces.

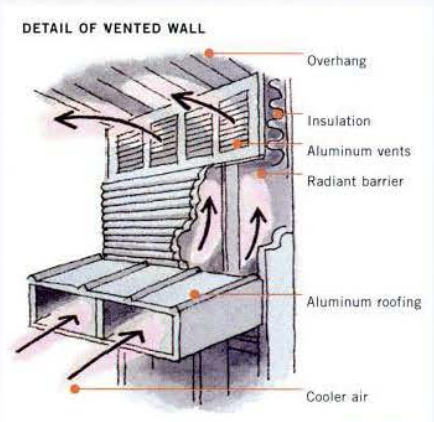
Pinto, a script supervisor in the film industry, who rents the top two floors, says, "I don't like air-conditioning. The ceiling fans do an excellent job. You can't keep the windows open if you have air-conditioning, and what's the use of living in a beautiful place if you have to lock yourself in? I sleep on the back porch, that's where I have my bed. With bamboo growing right outside, it's like living in a tree house—you can hear the crickets and birds. And it smells beautiful."

John Lantigua is a novelist and journalist based in Miami Beach. His latest novel, The Ultimate Havana, *was published by Signet in April.*

How the Palmetto House Breathes







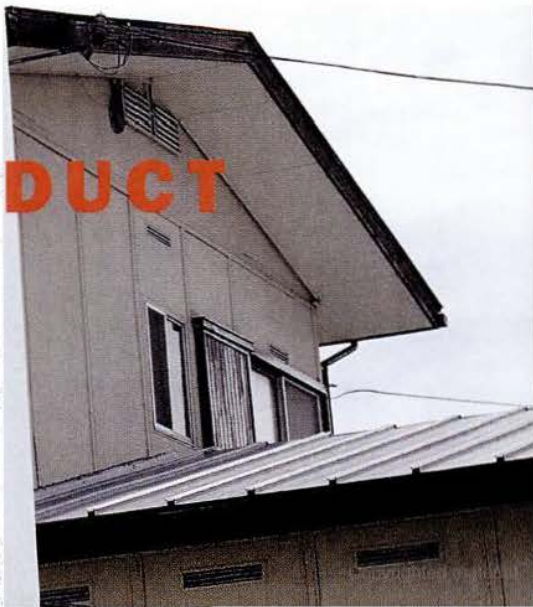
The Palmetto House is naturally ventilated and cooled, not an air conditioner in sight. This is accomplished by several facets of the construction, the first of which is the positioning of the house. The longer sides of the rectangular building face north and south. Deep overhangs on the south side minimize the amount of direct sunlight that hits the house during the hottest time of the year. On the other hand, they allow light to come in through the windows during the cooler months when the sun is lower in the sky. Throughout the house, awnings allow the windows to be left completely open, even in the midst of most rainstorms. The aluminum façade and roof help reflect some of the radiant heat. The large screened porches at either end act as buffers against the low rising and setting sun. Twelve ceiling fans keep the air moving through the house. The most technologically advanced components of the cooling system are the radiant barriers secreted inside the walls and roof which trap heat and expel it through vents in the walls and eaves. When the sun hits the walls or the roof, some of it is reflected, but some heat radiates in toward the interior space. When the underside of the roof becomes hot, a reflective Mylar barrier, positioned between the roof and the insulation, bounces the radiant energy into a cushion of air that separates the insulation from the roof. As the air in that space heats up, it naturally rises, sucking in somewhat cooler air from the shaded eves, pulling it up through the structure, and forcing the hot air outside, through the vents. It purges heat like an old-fashioned attic fan. —J.L.

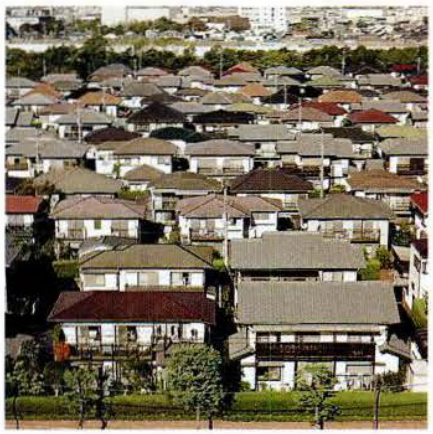
ILLUSTRATIONS BY JORGE COLOMBO

THIS HOUSE IS A PRODUCT

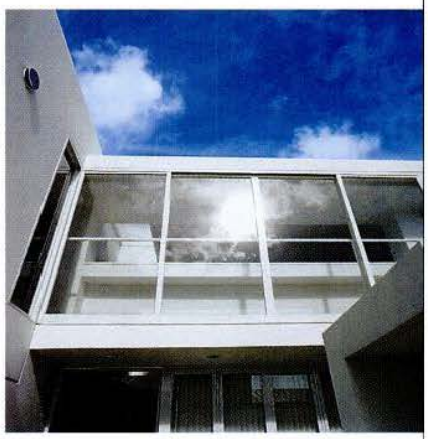
In Japan, most people buy new homes from companies called "housemakers." Buyers simply select a model from a showroom, a catalog, or a website. FOB Homes wants to be the housemaker of the avant-garde.

Story by Naomi Pollock, photographs by Nobu/Avgvst





In Suita, a Japanese Levittown (much like Urayasu, pictured above), Shingo and Miki Fujiwaki, and Hans the dachshund, live in a brilliant white box, a prototype built by FOB Homes.



"I could care less about tatami," 37-year-old graphic designer Shingo Fujiwaki says casually as he pushes a shock of long, black hair out of his eyes. Instead, when he had a chance to scrap his parents' 30-year-old house with its traditional straw flooring and replace it with the home of his dreams, Fujiwaki went in search of an architect who could give him what he wanted: a blank, white shell. In Katsu Umebayashi, the 37-year-old head of the design firm FOBA, he found just the man. And, in Fujiwaki's house, FOBA found what proved to be a perfect prototype for its new venture: FOB Homes, the architects' foray into the market of the housemakers, whose kit-of-parts homes account for almost all new houses built in Japan.

A 12-person practice founded in 1995, FOBA is based in Uji, a tea-growing town outside of Kyoto. FOBA is known for its experimental houses and inventive commercial projects such as its own headquarters building, "Organ," a snaking tube of continuous space complete with level changes and quirky angles.

The 1,376-square-foot house that FOBA built for Fujiwaki and his family sits on a corner site smack dab in the middle of Suita, a kind of Japanese Levittown on the outskirts of Osaka that was created at the time of the 1970 Expo (held nearby). Against the backdrop of the neighborhood's drab cookie-cutter homes, the Fujiwakis' house is hard to miss. It is a stark white concrete box—no parapets, no balconies, no ornament, no nothing. And, of course, there's not a curve in sight. It doesn't even have any windows aside from a low strip of glass on one side and a large plane of frosted glass on the other. Then there's the façade: a brilliant white wall, unbroken except where a niche was carved out for the entry foyer. Though almost entirely shut off from the outside world, the house was not meant to be introverted or insensitive. On the contrary, "whenever you face a blank wall to a neighbor, it's a favor," says FOBA associate Tom Daniell. The walls politely protect the Fujiwakis' privacy and that of their neighbors. And because they are set back from the property line, they also create welcome buffers of open space between houses. This is no small feat given the density in areas like this, where plots are small and houses are close together.

While this house may look modern with a capital "M," the orthodoxy doesn't extend much past its right angles and unadorned walls. The organization of this house and the way the Fujiwakis live in it are definitely homegrown. This becomes apparent the moment the threshold is crossed. Taking over where the exterior stone paving leaves off, polished concrete becomes the house's interior floor. Nonetheless, the Fujiwakis exchange outdoor shoes for indoor ones before proceeding into the heart of the house: a double-height, combined living and dining room that somehow connects with almost every part of the building. In one direction it flows into a sleek galley kitchen, a stainless steel Italian import, where the Fujiwakis can whip up espresso without dropping out of the conversation. In another direction it opens seamlessly onto an enclosed courtyard with glass doors that slide open to flood the room with daylight and fresh air (though the dog is the only family member to spend much time out there). A freestanding metal staircase connects to the second floor. But both master bedroom, a modest affair with just enough space for a double bed, and dressing room, with its exposed hanging bar loaded with the Fujiwakis' de rigueur black, white, and gray wardrobe, overlook the living area below. Even the upstairs bathroom, a narrow, skylit corridor lined with the most elegant fixtures money can buy, is linked to the main room.

The Fujiwakis' house is a far cry from the ▸

From the street, the Fujiwaki home appears to be an unbroken cube. The absence of windows is a Japanese form of courtesy, protecting the privacy of the residents and the neighbors. The large, rectilinear arch on the house's right side frames a courtyard (at left), separated from the street by strengthened translucent glass and lined with generous windows. Willy Guhl's indestructible fiber/cement "Loop" chair (far left) is the perfect piece of outdoor furniture for the minimalist tableau.

The open kitchen is an Italian import with fixtures by Modulnova and Smeg appliances. Galvanized steel stairs, at right, lead directly into the master bedroom. The laundry room, at far right, is part of the upstairs bathroom.

imitation Western-style homes churned out by house manufacturers who build with Lego-like prefab pieces or even their upscale made-to-order cousins. If you buy a car, camera, or watch in Japan, there are loads of good designs to choose from, explains Fujiwaki. But housemaker houses are another story. "You have no choice—it's bad design or nothing," says Fujiwaki. True, they come in a vast array of styles and they can even incorporate a traditional tearoom, complete with the customary tatami mats and the decorative alcove known as a tokonoma, plus a pass-through kitchen all under one gabled roof. But design-wise their stock solutions, based on the Western ideal of separate rooms for separate functions, are criticized for being bland at best, and at worst, poorly suited to the Japanese lifestyle. "The only things most people decide on is which housemaker, how many rooms, and how much they'll spend," laments Umebayashi.

It's not cutting-edge design that customers are after when they visit housemakers' showrooms and websites. The lure of the housemaker house is that it is a known entity before ground is ever broken. Each one comes with the promise of being built on time and on budget. It's also guaranteed: Should the synthetic slate roof leak, the company's 24-hour hotline is always ready to provide service with a smile. And because everyone is doing it, there is never the worry of having a house that's going to raise eyebrows. If the client wants a customized design statement, he can always hire an architect. Yet many prospective homeowners shy away from the incumbent risks of not knowing what sort of self-indulgent house an architect will concoct or how much it will actually cost. "Very few clients want a work of art; most want a life tool, a life container," says Umebayashi. Between these two extremes of standardized housemaker homes and one-off, architect-designed creations lies the gap which FOB Homes plans to fill by offering a design-conscious alternative that tops the construction quality of the housemakers' house but matches the price, which usually starts at $300,000 (not including land costs).

How can FOB Homes pull this off? By dividing the building process into six steps that provide the clarity and convenience of the housemaker's formulaic method and standardizing the design process to limit client choices. Though FOB Homes has yet to fully utilize this system, its products so far have a similar look and are planned as continuous internal spaces (albeit with careful functional zoning) that are composed from a conceptual kit of parts. Enclosed outdoor spaces are also part of the package.

"We want to make living fun and satisfying," says Mitsue Masunaga, the head of FOB Coop, a nationwide chain of 12 shops devoted to spreading the gospel of good design. Together with Umebayashi, her nephew, she is the driving force behind FOB Homes. Her shops, named after the shipping term "free on board," stock a range of interior goods, both foreign made and local, and she is eager to add house designs to her inventory. "The thing that people want most is a house," says Masunaga, "so I want to sell them." So kitchens are open and inviting, storage is generous enough to conceal all manner of unsightly clutter, and bathrooms are the most sumptuous spots in each house. (The Fujiwakis' bathroom features a miniature garden and a German-made Duravit tub.) This approach provides an image of the house and its organizational framework, ▸

The master bedroom (far left) overlooks the living room. A window-lined catwalk (center) leads to the bathroom and a walk-in closet.

Behind the luxurious German-made Duravit bathtub (below) is an area, open to the sky, where a small garden will be planted.

but the rest can be tailored to meet the needs of the most persnickety clients. Even the signature white surfaces are just a starting point. Be it the art on the walls, the food on the kitchen counter, or, as at the Fujiwakis' house, their forest green canoe which sits outside, decoration and color come from the client.

To date, the finished houses all seem like the products of an architect's office. This is no surprise because, so far, each of the three completed FOB Homes—and the 15 in the works—are products of FOBA. In contrast to the architecture office's other jobs, each FOB Homes prototype is being developed as a starting point with the idea that versions of it could be built over and over again one day. At the moment they have five prototypes, each one a diagram of a different plan type but all variations on the basic theme. "We'd like to get to the stage where people are ordering houses from the existing prototypes," says Masunaga. "That should make it simpler and cheaper." For now FOBA is still actively composing new prototypes.

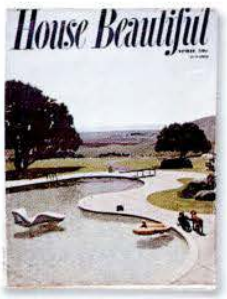
FOB Homes' basic organizational device is an updated rendition of Japan's traditional one-room living and flexible space. These went out the window after World War II, when Japan was trying to rebuild as quickly as possible. Western goods, especially those from the United States, were deemed desirable and modern, and were imported at a furious pace. Indigenous floor plans were supplanted by "LDK" layouts—a string of bedrooms attached to a living room, dining room, and kitchen. But many people continued to sit on the floor and sleep as a family in one room. "People just adopted all this stuff but didn't think about how to marry it to their Japanese customs," says Masunaga. Consequently, for the last 50 years or so people in Japan have had to make do with this mismatch. FOB Homes' mission is to set that straight. Yet this doesn't mean discarding all things Western or resurrecting everything traditional. On the contrary, it means picking, choosing, and abstracting the best from both worlds to make houses that fit with the lifestyle of contemporary Japan, itself a curious and constantly changing mix of deeply ingrained habits and 21st-century technology. Today, for example, a young couple like the Fujiwakis may want more privacy from their neighbors than their parents but within the home are comfortable with less. "Of course we need privacy," says Umebayashi, whose family of four sleeps together in one room, "but for us it is more a state of mind."

To attract potential customers, an FOB Homes mock-up was incorporated into FOB Coop's store on Tokyo's tony Aoyama Street, a major thoroughfare lined with corporate headquarters and high-end interior shops. Though hidden behind racks of cooking pots and shelves of bath towels, the mock-up is FOB Homes' answer to the housemakers' full-size models that may be visited at showrooms throughout the country. By gazing in the bathroom mirror or ascending to the sleeping loft, potential homeowners can get the gist of what an FOB Home is like. If this doesn't sell them on the idea, then maybe the company's slick brochures and postcards will. Unquestionably, the backing by the established and respected FOB brand is reassuring to customers and provides a built-in marketing and distribution channel that helps keep costs down. So far, word of mouth, favorable press coverage, and www.fobhomes.com are doing a good job of spreading the word. The open house at the Fujiwakis' home shortly after it was finished in March 2000 didn't hurt either. For two weeks throngs of architecture buffs, curiosity seekers, and neighborhood folk traipsed through the house, fitted with furnishings and housewares from FOB Coop for the occasion.

Throughout Japan there are vast tracts of housemaker houses from the '60s and '70s that will need to be replaced soon. According to the Ministry of Construction, only 15 percent of homes in Japan last more than 30 years. Umebayashi would like to see 100 of them a year replaced with FOB Homes. In concrete terms this is just a drop in the bucket. But FOB Homes could have a far broader impact by paving the way for the introduction of all sorts of other more architecturally assertive standardized houses. All it will take is 100 potential homeowners with good taste.

Naomi Pollock is an architect living in Tokyo where she writes about design.

The main room of the Fujiwaki house is supremely multifunctional. An FOB Coop table has tubular steel dining chairs inspired by Mart Stam on one side and a dachshund-friendly couch on the other. Despite the industrial strength polished concrete floor, outdoor shoes are exchanged for indoor shoes at the door.



On an oak-ringed bluff high in the hills of Sonoma County stands the most photographed swimming pool in history.

Designed in 1948, shown on the cover of House Beautiful in 1951, the Donnell pool is the original kidney. Endlessly imitated, it introduced a biomorphism lifted from the canvases of Arp and Miró to the American backyard.

THE SWIMMING POOL THAT CHANGED THE WORLD

STORY BY DEBORAH BISHOP

Sinuous, 60 feet long, and the aqueous blue of a Siamese cat's eyes, the Donnell pool floats at the top of the world—or so it feels as you stand gazing across a 30-mile vista toward the Golden Gate shining in the distance. The ur-kidney, designed in 1948, is the progenitor of all free-form pools in the country, the one that knocked the right angles right off the American swimming hole and inspired scores of biomorphic imitations that pale in comparison.

But isn't that the nature of icons?

So archetypal was this garden, that for years when you flipped open your *Encyclopedia Britannica* to "Landscape Architecture," a photograph of the pool wrapping around its own curvaceous sculpture dared you to dive in and join the party—the hedonistic California dream of barbecues and endless summers.

Of course, El Novillero—the ranch owned by philanthropists Dewey and Jean Donnell and now maintained by their children—had an icon of its own in landscape architect Thomas Dolliver Church. Two icons, when you consider that Lawrence Halprin—the 85-year-old landscape architect whose projects include Sonoma's Sea Ranch and Seattle's Freeway Park—worked for Church at the time and was intensely involved with the design of both pool and garden.

While Church attributed the pool's singular shape to the patterns made by the meandering creeks in the salt marshes of the valley below, others see the influence of Jean Arp and Joan Miró. "No matter what he says about the salt marshes, it reflects a time when everybody was on the same wavelength artistically and these influences were unleashed," argues Cleo Baldon, landscape designer and author of the book *Reflections on the Pool*.

"Well, yes, we were all very much influenced by people like Arp, Miró, and Kandinsky," says Halprin. "We grew up at a time when they were major artists—and what they did has a great resemblance to the gardens of California. Kandinsky influences me more every year. But all this stuff about influences . . . you cannot tell the specifics of why a line is drawn a certain way."

Like Isamu Noguchi's 1944 glass coffee table, Eva Zeisel's free-form Museum Shape dinnerware from 1946, and Morris Lapidus' palette-shaped "woggles," which began migrating to the ceilings of department stores in the early 1940s, the Donnell pool was both an organic product of its time and an unwitting ancestor to the mass-produced, self-conscious progeny—from amoeboid pools to patterned lunch pails to amorphous vanity tables in the Sears catalog.

America's first kidney pool was also the result of a technological breakthrough. Gunite, a stiff, fast-setting blend of concrete and sand that's sprayed onto pool framework and hardens almost on contact, allowed Church to shape his pivotal pool with ease and later enabled manufacturers to churn out kidneys like they were going out of style (until they did).

But it takes more than a kidney to create an iconic landscape. With an acre of oak-studded land in which to sprawl, this body of water is exquisitely scaled to its surroundings, like some modernist rendition of a mountain lake. And its shape, far from being arbitrary, is intimately connected to the nine-foot arching sculpture within, the meandering lines of the deck and lawn without, and the rolling hills and salt marshes beyond the clipped juniper hedge that contains the composition.

To Halprin, the pool's design is as important from the perspective of the swimmer as from that of the viewer: "A rectangle is a simple, rigid geometric form—there's not ▸


KIDNEY POOL

Landscape architect Thomas Dolliver Church commissioned Bay Area artist Adaline Kent to design an Arp-like sculpture (most of which is underwater) when he realized that the original plan—using a huge boulder from the site—could flay the skin off passing swimmers. "It separates the swimming and play areas and is a center of fun for divers and underwater experts, who swim through a hole in the base. Like most islands these days, it's usually crowded with sunbathers," wrote Church.

much you can do but go back and forth, over and over. But this pool of ours is much more interesting—you swim around things. The sculpture is like a boulder in a Sierra mountain pool: You can circle it, swim through the hole, or stop in the middle to sunbathe and socialize." And, adds Baldon, the pool has real geometry. "It may be free-form, but look—it contains a swimming lane! It was done with great intent."

Whatever its inspirations may be, the Donnell pool has doggedly resisted becoming just another Jetsonian cliché. "Arbitrary shapes—amoebas, zigzags, etc.—used without reason or apparent forethought, can be disastrous and become constant irritants in the scheme," wrote Church, whose 2,000 gardens designed during a 40-year career employed all such shapes without a whiff of irritation.

Born in 1902, Church enjoyed the outdoor life in Ojai and Berkeley, where at the age of 12 he designed a garden for his mother. He shunned law for landscape architecture at the University of California at Berkeley and received his master's from Harvard's Graduate School of Design with a thesis that compared the Californian and Mediterranean landscapes, finding the latter "delightful and livable because of scale and imagination—not magnificence."

It was, as he said, a prophecy. For not only had the Depression made a dent in people's ability to hire legions of help to tend lavishly planted gardens, but California was screaming for an idiom of its own—one of drought-resistant plants appropriate to the climate and simplified schemes suited to an informal, alfresco lifestyle.

Out with the Palladian pavilion and in with the pool house.

The California garden offered an ideal canvas for a composition of terraces, cabanas, pools, and companionable gathering places for soaking up the sun and the martinis—and the plant life helped support the good life with shade, windscreens, and minimal maintenance. "How well it provides for the many types of living that can be carried on outdoors is the new standard by which we judge a garden," wrote Church, in *Gardens Are for People*.

More concerned with functionality than horticultural ornamentation (he once jokingly commented that his favorite ground cover was asphalt), Thomas Church is the ▸

man most credited with releasing the California garden from its Beaux Arts spell and English aspirations.

Church did look to Europe for inspiration, but it was the Europe of the present rather than the past. In two trips taken a decade apart, he was drawn to the architecture of Le Corbusier, Arp's dreamscapes, Miró's Cubist paintings, and Aalto's undulating glass objects, although in Renaissance Italy he did find a potent parallel with California: "In both there is a class of people with the wealth to demand comfort and luxury, and the intelligence to demand beauty—a combination that, wherever found in the history of the world, has resulted in the planning of beautiful gardens." The dream client defined.

Church's style was secondary to the goal of marrying the wishes of the client to the possibilities of the land. His many projects include Pasatiempo, a planned community near Santa Cruz, the garden for the *Sunset* magazine headquarters (which consummated the love affair between the magazine and its favorite son), and the formal twin allées of pollarded sycamores planted beside the San Francisco Opera House.

During his second European tour, in 1937, Church visited the steel-and-glass pavilions of the International Exposition in Paris and went to Finland to meet Aalto, whose modernist Villa Mairea, then being designed for industrialist Harry Gullichsen and his art collector wife, Maire, has its own amorphously shaped pool—something between a kidney bean and a boomerang—nestled into the pine forest.

"Those days there was a headiness . . . as if it were a crusade we were on, not just something new or different. It was a social movement, the breaking of the box," recalled former *Sunset* editor Walter Doty, in an interview conducted by U.C. Berkeley's Regional History Office. Church got a chance to blow up the box in 1947, when he was hired to design the gardens and outbuildings for the Donnells' 4,000-acre Sonoma ranch.

Living comfortably off money from family oil interests, Dewey and Jean Donnell not only appreciated contemporary design, they embodied the active, outdoor California lifestyle suited to a horticulturally restrained garden that blurred the boundaries between indoors and out. "My parents loved the modern aesthetic. And they were clear in wanting single-story ranch-style structures—nothing fussy, and no stairs," recalls daughter Sandra Donnell. "That's what drew them to Church in the first place."

Although building materials were restricted just after the war, the pool was allowed to proceed as a fire-fighting resource. "Usually it's the architecture that leads the symphony," said Halprin, "but this was a wonderful opportunity, because it was the landscape that conducted. The pool and the gardens set the tone and everything else followed." An architect on Church's staff, George Rockrise, designed the lanai and cabana, which look of a piece with the main house, designed a few years later by architect Austin Pierpoint.

Jean, an enthusiastic gardener, was given a kitchen garden for herbs and roses and a greenhouse to raise exotic orchids, as well as three paved outdoor rooms. But the main expanse, set some distance up from the house in an oaken knoll, was to be a place for swim parties, ice cream sodas, barbecues beneath the trees, and cocktails under the stars. After Church chose his site, he selectively removed enough live oaks to frame the view over the valley yet retain a windscreen.

Today, El Novillero has been impeccably preserved by the Donnell children, who reunite at the ranch during holidays. Relying on memory and photographs, they've kept the house and garden as true to the original as possible, which includes replacing oak trees as they succumb to root fungus. "We had so many good times here," says Sandra Donnell, "so many wonderful parties. Because our parents died fairly young, we decided to keep the property as it was when they were alive, and to share it with others." Landscape architects and students make the pilgrimage each year, greeted by caretaker Neill Whitman, who lives on the property with his wife and two cats.

The pool, glazed lanai, and cement cabana are like a diorama of life during that period of postwar bliss when social unrest was a rumble so low that it was barely audible. Shapes borrowed from a Calder mobile sprawl across the wallpaper in the guesthouse, where monogrammed towels are poised for a post-dip dry-off. Period upholstery covers the studio-style couches and back issues of *Holiday* magazine (from 1954) are scattered on the vintage tables alongside angular lamps and glazed ceramics. All that's missing is Chet Baker or Shirley Horn crackling on vinyl.

"It's the same feeling you get from visiting the Truman House or Graceland—as if the place is still inhabited," says landscape architect Charles Birnbaum, editor of *Pioneers of American Landscape Design*. "I feel like I'm walking into a Technicolor movie from the fifties—including the shade of blue in the pool."

In his autobiography *Becoming a Man*, the late writer Paul Monette describes the otherworldly experience of encountering the Donnells' realm, where people ate off Picasso-patterned plates and peacocks strutted by the pool. Brought up in a New England colonial prefab, he first met the family when visiting the nearby home of a Yale roommate in the early 1960s: "I was in a state of near hallucination from the moment I set foot there. Rich, where I grew up, meant old polished wood in high-ceilinged houses silent as churches. This was a sybarite's pleasure-dome instead, the California good life raised to the nth degree. A stallion ride before breakfast, oranges right off the trees."

To visit the ranch today is to enter a kind of time warp, quite apart from the period trappings and not because the landscape feels particularly dated (though some of the materials betray the era). Rather, one has a sensation of being transported to a distant time, when getting a piece of the "California good life" was as easy as plucking an orange from a tree—and being "modern" meant something. In 1968, the Sears Point Raceway was carved into the Sonoma foothills below El Novillero, proving that even money is no protection from progress. On calm days, the distant whining from the track intrudes upon the dreaminess of the setting and very nearly drowns out the ghostly sounds of ice tinkling against highball glasses.

For caretaker Whitman, the garden is most magical and meditative at night: "On a clear evening I like to sit on the end of the diving board, with the stars a few feet away and the lights of the city sparkling beyond the oak trees. I tell you, it's like being right in the middle of a Maxfield Parrish painting."

Deborah Bishop is the co-author of Hello Midnight: An Insomniac's Bedside Companion *(Simon & Schuster), a compendium of all things sleepless.*

London

FROM GROPIUS TO GOLDFINGER

STORY BY ALLISON ARIEFF

My first encounter with London's architecture was pretty much in keeping with the popular imagination's view of the place: Buckingham Palace, Victorian row houses, St. Paul's Cathedral. Years later, the tourist guidebook version of the city is still open for business—if that's what you're after. The experience of London architecture will always be steeped in history but of late the country has been involved in an increasingly passionate affair with the new. Tradition and innovation embrace one another, with the expected British reserve, but it is this romance between old and new that allows modern architecture to have a fighting chance in the country that registers every remaining red telephone booth with the National Trust.

London, like New York and San Francisco, has experienced an economic boom that has driven property values through the roof and sent people to the far reaches of the city in search of any available space. Areas where most London residents, not to mention London visitors, would not have ventured before have been utterly transformed.

A series of major revitalization projects on London's South Bank, for example, carried out in the last several years, has demonstrated an increasing tolerance for, if not wholehearted support of, modernism. These include the Tate Modern 1, the Oxo Tower, and Butler's Wharf. The popular success of the new Tate, designed by Swiss architects Herzog + de Meuron, has gone a long way toward validating modern architecture in the hearts and minds of Brits, the Prince of Wales notwithstanding. Certainly the residents of the Bankside Lofts 2 designed by CZWG Architects (just steps away from the Tate's entrance) approve. The Bankside complex integrates a Victorian warehouse, a 20th-century commercial building, and a mango-colored cylindrical thing designed by CZWG architect Piers Gough into a unified residential structure that works to please preservationists and modernists alike.

The same could be said for much of Butler's Wharf, just down the river past the Tower of London (built, incidentally, in the 11th century). Once the largest warehouse complex on the Thames, Butler's Wharf was rundown and virtually abandoned. Then in the early 1980s, the former docklands was brought back to life by a development team led by Sir Terence Conran, a man whose ever expanding empire of hotels, restaurants, and shops throughout London brings to mind a kinder, gentler, and infinitely more design-savvy Donald Trump. On Butler's Wharf alone, he has opened four restaurants, collectively known as the "Gastrodrome."

As I strolled through the Design Museum (founded by Conran and Stephen Bayley in 1989), ate lunch at Conran's Blueprint Café on the museum's terrace, and walked past the Conran headquarters building designed by Michael Hopkins and Partners on my way back to my hotel (Conran's latest—Great Eastern Hotel 3 on Liverpool Street), I was surprised that the whole area—let alone the entire city—hadn't been renamed "Conranville."

Another area that has undergone a remarkable transformation is Notting Hill. Not so long ago, the neighborhood was best known for the antiques market on Portobello Road and not much else. Now one of London's trendiest shopping and residential districts, the new Notting Hill demonstrates a particular affinity for modern design. On Westbourne Grove in the heart of Notting Hill, even the public restroom is hip. Just opposite the CZWG-designed lavatory, which features aquamarine glazed-brick walls and a glazed canopy, is the Laundry Industry boutique designed by Amsterdam's Concrete Architectural Associates, who in the last few years have worked on everything from a Dunkin' Donuts to an art museum in Utrecht. Just around the corner, on Ledbury Road, is Future Systems' space-age flower shop, Wild at Heart 4. The store has an amorphous shape etched on its front window and a cast-aluminum walkway that unfurls like a tongue out the front door. The Simon Finch Bookshop 5, designed by Marina Chan, carries new and rare books on art, architecture, design, and film. Notting Hill's Hempel (named for its architect, Anouska Hempel) and Westbourne hotels have in common Japanese-influenced modernist interiors tucked behind more traditional façades.

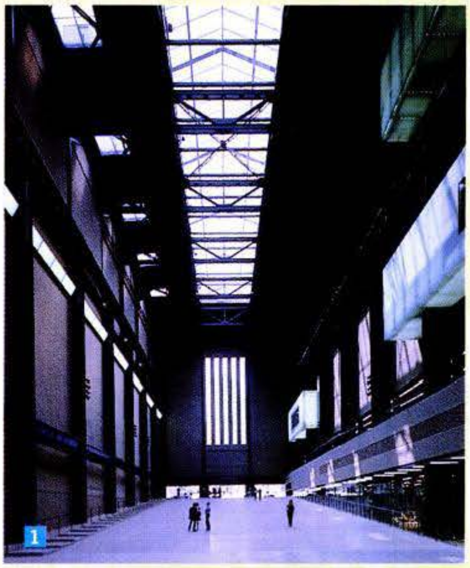
It is difficult to find much in the way of modern single-family homes. Contemporary examples are most often limited to modern insides wrapped in traditional outsides (and thus unavailable for public viewing). The terraced southwest London house of uber-minimalist architect John Pawson, for instance, seen from the street, offers no hint of the cool and sparse oak, stone, and glass interior within. There are exceptions—houses designed by Future Systems, Caruso St. John, and David Wild in Islington, for example—but your best bet for catching a glimpse of London at home in the modern world may be an afternoon spent browsing through Taschen's coffee-table book *London Interiors*.

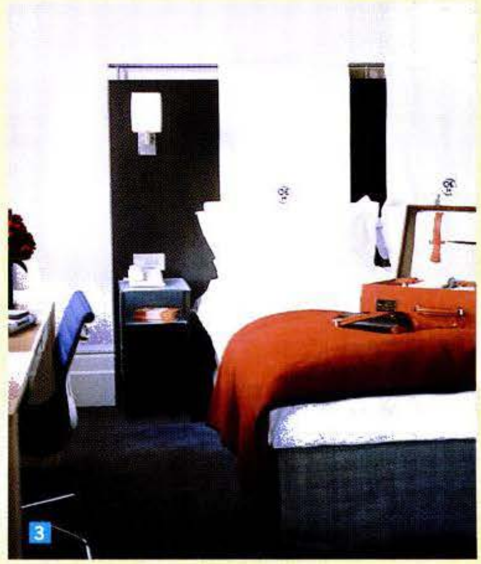
England was, for a brief period in the 1930s, a little tea cup–sized tempest of modernism. Architects in residence during that time included Serge Chermayeff, Marcel Breuer, Erich Mendelsohn, and Walter Gropius, and a number of their classic modern designs are scattered throughout the country. On Old Church Street in Chelsea, for example, sit a pair of adjoining houses done in the International Style. Mendelsohn and Chermayeff's 6 steel-framed, multi-windowed, elongated rectangle was completed in 1936. Norman Foster added the foliage-filled glass conservatory in 1993. Also built in 1936 was the Gropius and Maxwell Fry collaboration next door, whose original cool white cement façade was marred by Crosby, Fletcher, and Forbes' unfortunate addition of dark wood shingles in the 1970s. In Hampstead, just a few tube stops from central London, is Two Willow Road, the Surrealist art-filled home of Hungarian architect Erno Goldfinger, built in 1939.

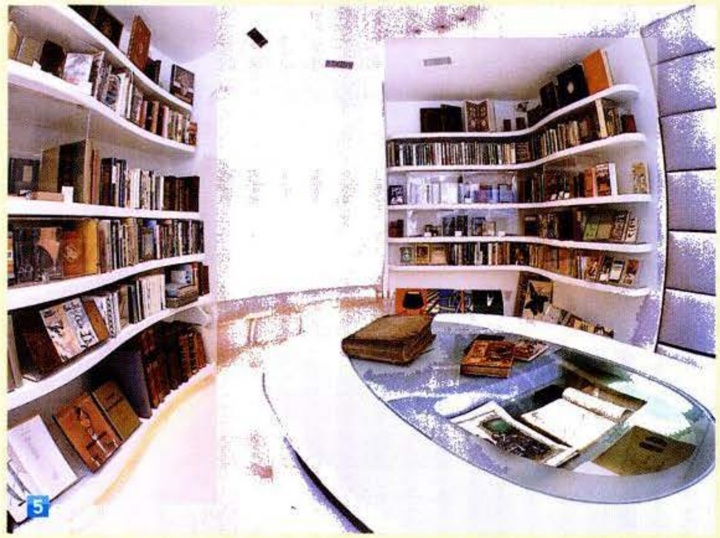
Then as now, modernism was the target of hyperbolic critique. But at least Goldfinger's most famous critic was creative with his insults. Goldfinger's neighbor and James Bond creator, Ian Fleming, developed such dislike for Erno and his architecture that he named one of his villains after him—Bond archnemesis Auric Goldfinger.

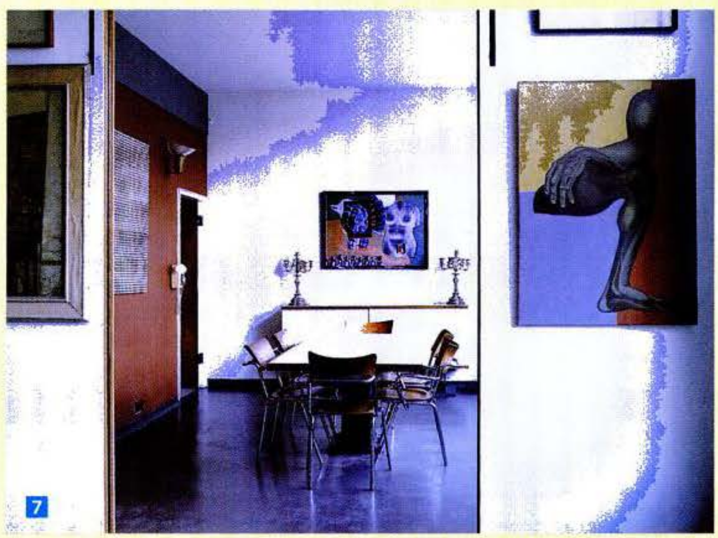
My most recent visit revealed that even England can change: Goldfinger's house 7 became the first modern acquisition of the National Trust in 1998.

Allison Arieff is the senior editor of dwell magazine.









PHOTOS BY CHRISTIAN RICHTERS / ESTO (1); ALLISON ARIEFF (2, 6); RICHARD DAVIES (4); ROBERT ALLEN (3); PHILIP HARRIS / NATIONAL TRUST PHOTOGRAPHIC LIBRARY (7)

INTERIOR DESIGN: IT *IS* ROCKET SCIENCE

STORY BY M.G. LORD
PHOTOS BY GAIL ALBERT HALABAN

SABA

Beverly Hills interior designer Rosanne Sachson (above) surveys the results of her most unusual commission, the Jet Propulsion Lab's Flight System Testbed, where, collaboratively, rocket engineers plan and design outerspace missions. Sachson's program is occasionally undermined (right) by the engineers who work with the testbed.

Most people know the Jet Propulsion Laboratory in Pasadena, California, through its triumphs, like the Mars Pathfinder spacecraft, which landed on Mars in 1997, or through its equally spectacular failures, like the Mars Climate Orbiter, whose disappearance in 1999 was blamed on a confusion of metric and U.S. measurements.

I've known it since the late 1960s as a place my father briefly worked and, through his eyes, as a fortress of logic and order. But Daddy, I discovered, while researching a book on cold war–era aerospace culture, failed to see the total picture. JPL's founders, Frank Malina and John Parsons, for example, were far from lockstep, plastic-pocket-protector types. Malina, according to his FBI file, was a member of the Communist Party, and Parsons headed the Pasadena chapter of the Ordo Templi Orientis, a pagan cult established by *Diary of a Drug Fiend* author and alleged Satanist Aleister Crowley. Yet the strangest tale I stumbled upon took place in 1993, when Rosanne Sachson, an interior designer based in Beverly Hills, was brought in to implement a radical transformation in the way JPL designs its space missions.

Sachson created a Flight System Testbed—FSTB to the acronym crowd—that was as revolutionary as its name is unenlightening. Before we look at Sachson's role, we have to understand what an FSTB is, and how it changed traditional practices. Until the 1990s, spacecraft were built according to an entrenched formula. Teams of engineers for each subsystem holed up in private to perfect their individual parts. Then they got together to see if their parts, or subsystems, would work with the other parts. When, finally, the parts were integrated as a whole, they called that whole a "spacecraft" and tried to figure out what they could do with it. In fancier terms, they "designed a mission" around the spacecraft's strengths and limitations.

In 1993, however, Kane Casani, a 30-year JPL veteran and former head of NASA's New Millennium Program, had a radical idea. What if engineers actually talked to each other during the earliest design process? What if they didn't wait until their subsystems were finished to plan missions? By the early 1990s, advances in computer modeling had made it possible to hook up a mechanical model of one component—say, an optical system—to a computer simulation of another component—say, the radio system—to see how they worked together. Why couldn't engineers use this technology to refine their subsystems while they were building them?

The idea of a testbed was not new. In the past, each subsystem had a work area where its components could be tested. But to transform the design process, projects needed a work area for trying out combinations of subsystems, where designers could talk.

"We wanted to create a testbed that was designed not just around a spacecraft, but around the whole project, including the spacecraft's mission," Casani explains. "If you were building a spacecraft that would go to Mars, for example, you could simulate the flight to Mars. You could make the landing rockier. Or smoother. Anything in the environment that was important you could simulate"—which is exactly what the FSTB did for its first tenant, the wildly successful Mars Pathfinder team.

Although the wisdom of Casani's idea now seems self-evident, it was initially so strange that JPL's facilities staff opposed it. They couldn't imagine a workspace without cubicles or similar warrens in which engineers could hide. "This was why we brought in Rosanne," Casani tells me. "I wanted someone who knew nothing about what we did here but who knew about design. Somebody not from our culture."

Sachson definitely fit that bill. After working with hotel designer Howard Hirsch Associates, she independently executed homes and offices for such Los Angeles luminaries as *Friends* star David Schwimmer. She is fiercely committed to access for the physically challenged—a consequence of designing a barrier-free house for actor Larry Pressman (*Doogie Howser, MD*) and his wife, actress Lanna Saunders (*Days of Our Lives*), whose mobility has been impaired by multiple sclerosis. (The FSTB is wheelchair accessible.)

Casani and Sachson clicked at first sight. "I gave away my whole idea," she admits, instead of revealing only a tiny bit, as a tease. Casani, too, swiftly dropped his poker face. "I love it," he blurted when she described a key feature: a "wave" wall, whose curve would set the FSTB apart from the lab's other rectilinear spaces and evoke the vapor trail of a rocket. She also proposed a warm wood—birdseye maple—for the wall and a conference table in front of it. The idea, foreign to engineers, was to make the space inviting.

The facilities staff did not make Sachson's job easy. Even choosing the paint was an ordeal. NASA has a warehouse of colors, none of which, she recalls, "looked good"; but she had to prove it. "I put up a warm white next to the NASA yellow-beige and made everybody come see," she says. Even the engineers shrank from the bilious beige.

Casani, a fan of the Italian Renaissance (he has a bronze copy of Verrechio's *David* in his garden), quoted Machiavelli to Sachson when she felt besieged: An "innovator" makes "enemies for all those who have done well under the old" and "lukewarm defenders amongst those who may do well under the new."

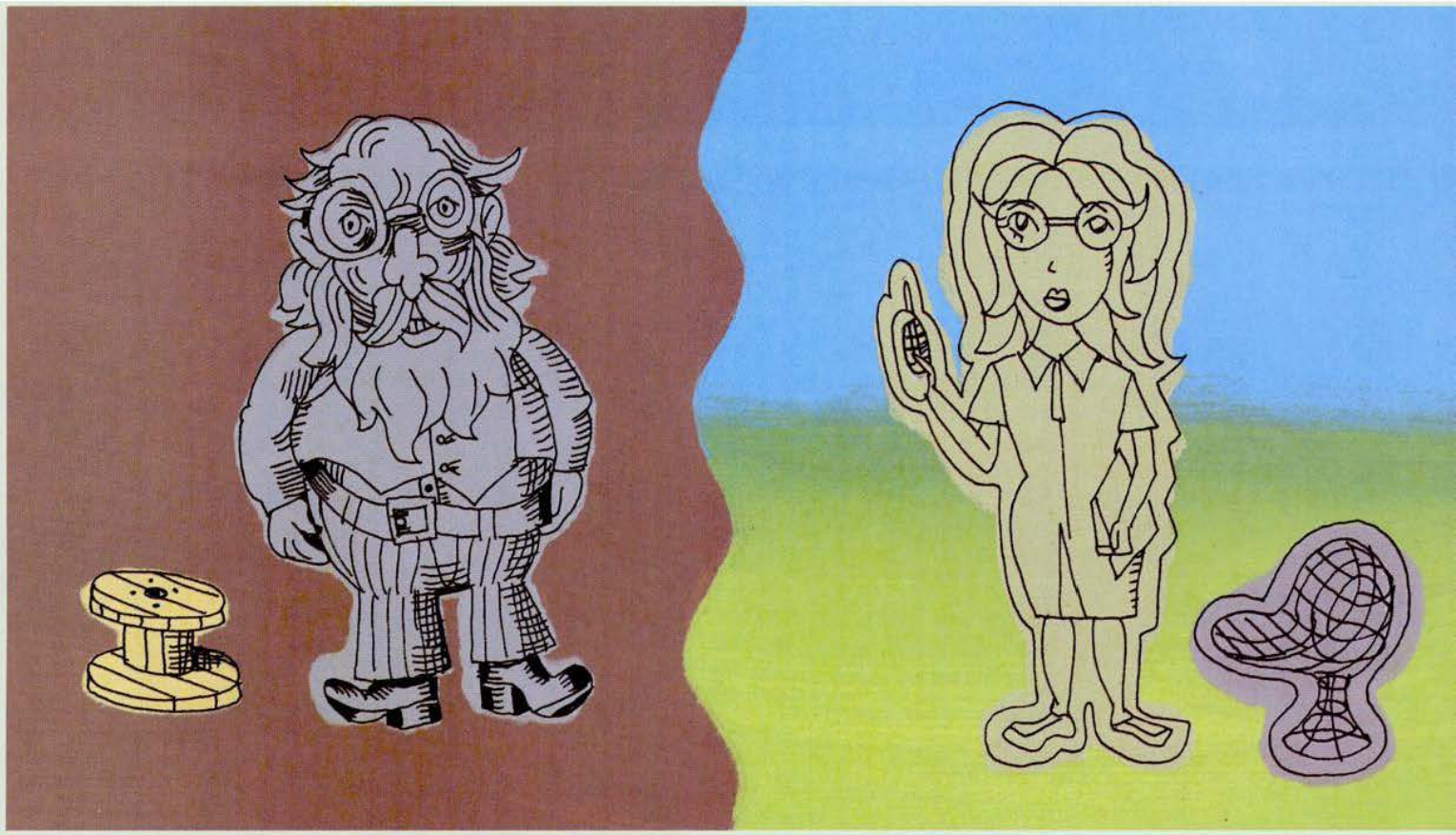
Upon completion, the testbed was criticized for its "opulent look," Casani recalls, but its actual price was modest. "We spent an extra $30,000 on what was a $900,000 project," an increase of a mere 5 percent. Its savings, however, were immense: "It reduced the costs of projects by hundreds of thousands of dollars. A project that cost $150 million"—the Mars Pathfinder, for example—"probably saved $10 or $20 million" thanks to simulations that the testbed made possible.

In its way, this encounter between an interior designer and the rocket engineers has been as odd and daring as any executed in outer space. And its results, like those in the search for Martian water, are promising but mixed. After use by dozens of missions, the materials Sachson chose for the FSTB have, for the most part, held up. True, many of her color-coordinated chairs have vanished. "They were uncomfortable," Nick Thomas, former testbed manager, reluctantly admits. And engineers have stacked noisy computer components on her countertops instead of in the storage areas below. But a new testbed just constructed at JPL copies nearly every detail of Sachson's design, right down to its wave wall—the sincerest form of approval.

On a recent visit to the FSTB, Sachson politely suggested that system administrator Eugene Ramos keep his earsplitting computer components in the cabinets she had designed to hold them.

"If somebody doesn't keep telling the next group why it was done a certain way, how will they know?" she asks. With residential clients, she anticipates problems and isn't above intervening to prevent them: "I always take photographs and make a booklet so the housekeeper will know where things go."

M.G. Lord is the author of Forever Barbie: The Unauthorized Biography of a Real Doll. *She is finishing an informal history of the Jet Propulsion Laboratory for Simon & Schuster.*



WHAT IF GREEN DESIGN WERE JUST GOOD DESIGN?

STORY BY BRUCE STERLING
ILLUSTRATION BY GARY PANTER

Green design should have won 30 years ago. By now, we should have forgotten all about being green. Greenness should be par for the course, the way things are, the accepted, everyday method of running our lives. Greens excel at spreading dread and malaise. Alarmism is still what they're best at. When it comes to specific accomplishments, greens may be the worst designers ever. Their victories are small, anecdotal, and very thin on the ground. The rampant signs of their defeat are all over the landscape: in suburban sprawl, traffic jams, bulging trash heaps, leaking pesticides, melting ice caps, and funereal swarms of extinct species.

Greens deserve some credit for culture-jamming the arms race. They may yet kill off genetically modified crops, too, at least in Europe. But nuclear suicide and food fads were the easy green problems. Those were big, abstract predicaments, very distant from people's daily lives, people's real needs and desires. Nobody wants to be roasted by an H-bomb. People never shop gourmet boutiques for gene-warped food.

Green design is firmly based on the core insight that everything is holistically connected to everything else. "Environmentalism" is about "the environment," which is to say, everything around us. But when you want to get something accomplished, it's a total calamity to be "connected" to "everything." It means there is no such thing as irrelevance. All accomplishments are permanently suspect, and no sideline critic ever runs out of ammo.

Green design is for nobody, but green critique is for everyone. Let's consider a hammer. You may naively think that a good old hammer must be pretty green—simple, artsy-craftsy, and energy-efficient—but what about the toxic effluent from that nail factory in distant China? Ha! I've got you there! You've hammered up a new room for your kids that's warm and snug, but what have you done to redress the patriarchal and imperialist biases inherent in a privileged single-family dwelling? You did nothing? Those issues never even crossed your mind? Why, you hopeless pig!

The planet has genuine, deadly serious, green concerns, but greens turn out to be easily distracted, profoundly ineffectual people. They're philosopher-poets when there's a screaming need for engineers. Years of existing on society's fringes have led them into many bizarre practices. Their decor choices, for instance: earth colors, stripped wood, undyed cloth, and ethnic bric-a-brac. These weird little sociopolitical signifiers shouldn't be mistaken for thriftiness or good sense. There's just no pressing need for anybody's decor to look that corny. It's entirely possible for a no-budget house furnished with recycled debris to look good.

If you're into home design and you want to be "modern," it's not a problem. You just click on www.designwithinreach.com and order a 74-year-old Eileen Gray end table. Being

"modern" may be a total oxymoron, but at least it's a straightforward, immediate, and consumer-friendly way to be. To be green, however, means wading hip-deep into dense, spooky, patchouli-scented tomes like the *New Natural House Book* or *Natural Home* magazine. These publications heroically tackle a host of green design problems. Unfortunately, a lot of these "problems"—healing herbs, homemade tofu, wheatgrass smoothies, house-blessing ceremonies—aren't problems. They're rituals.

Hypochondriacs dearly love green publications. That's because they're chock-full of quackery. Believe it or not, most people troubled by allergies aren't at all "sensitive" to "toxins" from "industrial" products. They are allergic to pollen, which is to say, they're allergic to flowers and trees having sex.

Being green is not really about the greenness. Being green is cranky, fringy, and deservedly unpopular, and has never been simply taken for granted as a sensible way to get along. The constant grind of all that self-conscious alternative being-ness is a major drag. Moral panic is a difficult state of mind, and the best way to stay there is by immersing yourself in endless runarounds that have no genuine consequence. It's considered rather green-designish to set up a meditation space in the house, with some aromatherapy and an unbleached Danish *zazen* pillow. When Buddha meditated, he sat on the dirt under some trees. Do people meditate better with some Indonesian incense burners and a lumpy hemp carpet? Of course not. But they feel better about their ongoing intention of meditating—that's the point. When houseguests discover that private spiritual space, they'll be really impressed by its sumptuous humility.

The green response to the way the world works has been deeply wrong-headed. Superb at complaining, they're lousy at reform. They are permanent revolutionaries who would rather starve in a garret than govern. Their wacky doctrines serve best as a loose-leaf bible for a permanently discontented minority. This in itself is not so bad. In fact, it's great. Permanently discontented minorities are lovely things to have around. But the failures of green are very serious failures. Many concerns best described as "green" are factual, chronic, real-world problems that are clear and authentic menaces to civilization. Something real and effective has got to get done. And real, effective, green things are doable things. They're not tremendously romantic, paisley-spangled, or transcendental things, but they could happen.

A green victory condition would mean becoming the mainstream. This means drudge work—running city councils, digging big, grimy, expensive holes for mass transit. It also means buying out large, ugly industries and replacing nukes and coal mines with giant windmills. It means redesigning consumer goods so that they respect human flesh, so they're good to hold, fun to look at and listen to, usable, responsive, and, god forbid, *sexy*. It means building comfortable homes that are healthy and environmentally aware, not dim, stuffy eco-huts that aspire to the fully sustainable condition of coffins.

Victory means becoming a green establishment and sacrificing the bohemian romance. This means that people passionately obsessed about green will become backward, old-fashioned relics. In a world that is truly green, the term "green" is very old-fashioned. Green becomes real life. And real life means running the works and getting ceaselessly complained at, which is why greens never want to enter that territory.

The "technology" that greens complain about isn't even technology. The word "technology" merely means "stuff invented since I was born." Fighting that newfangled stuff involves faddist, reactionary tactics, and it never digs down deep enough to get strategic. It is our great-grandparents' technology that is doing us in. Most people will never figure that out because they're too busy being alive; they can't tell history from background noise. That should not be a problem for green designers, because understanding things better than normal people is what designers get paid for. In order for technological reform to work, in order for green to win, it's got to be designed better. It has to be received with rapturous cries of consumer delight, and then quickly forgotten about. Any technology that normal people are excited about or indignant about is one that normal people are not using yet. People need to use green technology and green design every single day. It has to be more than politically correct, or even user-friendly; it has to be taken for granted. It has to tick along in the background with all the other technologies that people use a million times a day and never think about—stuff like clocks, forks, and running water. That is how it really works; that's the way forward. ■

The Green Devil's Dictionary

This handy one-stop shop for jargon isn't about what these standard green terms are intended to mean. No—this wicked dictionary is about what these words *leave unsaid*, which is plenty. —B.S.

aware—nervous, twitchy, stressed

calming—dull, banal, simpleminded

safe—very frightened

harmonious—monotonous

tranquil—stoned

healing—finicky, quackish, hypochondriacal

intimate—cramped, smelly

harmful—anything disenchanting or mentally confusing

natural—commercially packaged by the alternative products industry

centered—self-centered

appropriate—best-suited to Third World rural villages

healthy—coarse, penitential, itchy, hard to chew

spiritual—any urge or need that takes a long time to explain

responsible—self-righteous, mean-spirited, fussy

efficient—hugely demanding of unpaid time and attention

voluntary simplicity—less is more work

sustainable—unprofitable, noncommercial

local—parochial, substandard

global—wishful, imaginary, somebody else's problem

independent—isolated, paranoid ▸

The Green Devil's Dictionary
(continued)

connected—overworked, hopelessly complex, immobilized

inspired—impractical

practical—actively hazardous, not for amateurs

serious—expensive

magic—ridiculous

timeless—weird

time-honored—primitive, squalid, medieval

recycling—hand-washed garbage

re-used—salvaged, run-down, rusty, and/or splintery

non-toxic—fast-rotting

herbal garden—unpaid agricultural hand labor

rammed earth, straw bale, adobe—dirt, straw, dirt mixed with straw

earth-sheltered—half-buried

bamboo—grass attempting to be lumber

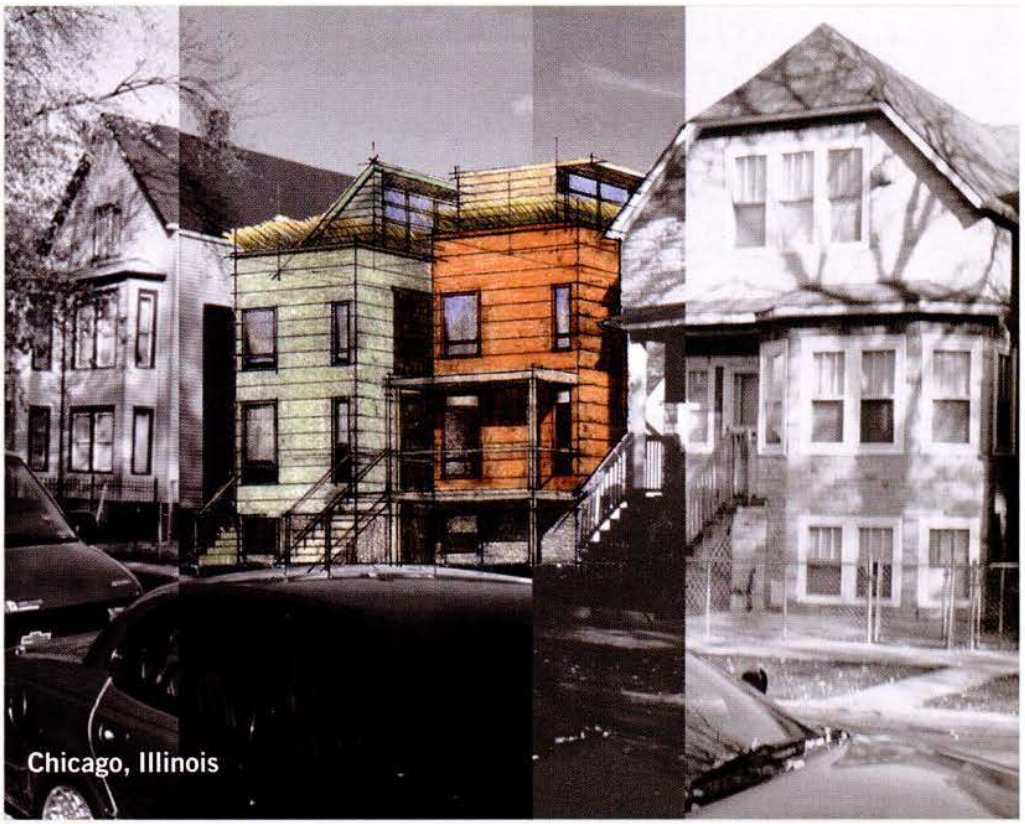
eco-collective—large crowd of shiftless roommates

fellow creatures—mosquitos, weevils, rats, houseflies

chemical—any manufactured item requiring licenses, inspectors, and a college education

wabi, feng shui, zen—gringo backpacker jargon

Bruce Sterling is a science fiction writer based in Austin, Texas. Some of his most recent work includes Holy Fire, Distraction, *and* Zeitgeist.


Chicago, Illinois

SUSTAINABLE SOLUTIONS:


Amersfoort, The Netherlands

The lot at 1917 North Keeler Street in Chicago's Hermosa neighborhood has been vacant for years. By September, a family will live there in a new house with a carpet of native grasses growing on the roof—and they will enjoy more daylight and lower heating bills than most of their neighbors.

The enlightened client is Mayor Richard M. Daley of Chicago, and the house, designed by the Chicago office of Esherick Homsey Dodge & Davis (EHDD), is one of five competition-winning "Green Homes for Chicago."

Daley has taken to green design recently; one of the largest urban roof gardens in the U.S. is now on the top of City Hall. The Green Homes infill projects are his latest attempt to set an example for builders and architects. David Reynolds, deputy commissioner at the city's Department of Environment says, "Working through the Department of Housing's New Homes affordable housing program was a visible place to start pushing the agenda in the residential area."

The Committee on the Environment of the local chapter of the American Institute of Architects, which has a close relationship to the city's Department of Environment, helped shape the competition. The brief requested a base house design for $115,000, a "green upgrade" design, at $125,000, and a more sophisticated version at $175,000. Reynolds says the city hopes to build one house at base level and two at each of the higher levels. Ironically, the construction is being supported by funds from the city's multi-million dollar settlement with Commonwealth Edison over a series of 1999 blackouts.

Size reduction was the first of four strategies employed by the EHDD team, which included Marc L'Italien, Marjorie Brownstein, Scott Shell, and Susan Hagerty. The three-bedroom, 1,200-square-foot house is less than half the size of the average American home. They also addressed improved efficiency, extended life span, and impact reduction. A "solar chimney" maximizes light and air in the house. The team located windows close to the corners of the structure, a tactic that firm founder Joseph Esherick employed in his early house designs. "This eliminates the glare in the room and allows light to 'wash' the space," L'Italien says. The roof will be planted with native grasses, providing superb insulation and minimizing storm water run-off.

The city structured the competition so the designs can been "greened" with add-on features. But designing with efficiency and effectiveness in mind is a holistic, integrative process, not an additive one. Reynolds is aware of the dangers of the incremental approach and encouraged competition entrants to think in terms of systems.

A few houses cannot change the paradigm. But inching it along, which is the effect that five infill houses will have, is precisely the point of demonstration projects. An affordable, city-sponsored house that is more humanistic, beautiful, and efficient than its neighbors will certainly be noticed.

"We plan to incorporate the most effective strategies into the city's affordable housing specifications," Reynolds says, "so that all affordable housing is being built in an increasingly sustainable way."

CHICAGO & THE NETHERLANDS

STORY BY KIRA L. GOULD

American architects can sometimes be heard grousing enviously about the framework of government regulations and public awareness in many parts of Europe and Asia that has supported sustainable design for years. In the Netherlands, ideas about sustainable design are rooted deep in the country's history. The Dutch are widely perceived to have dismantled the dichotomy between nature and man more effectively than American designers, planners, and officials have been willing or able to do.

The combination of government encouragement and public interest means that even housing and communities designed with aggressive sustainability features succeed, especially in growing areas where dwelling shortages have been persistent. The Nieuwland Development Area is an urban extension of Amersfoort, a town 32 miles east of Amsterdam. Within that is Walwonigen, a neighborhood of 56 three-level, 1,300-square-foot houses designed by Gouda-based Bear Architecten. The project was completed in 1999 and the homes sold for $200,000 each.

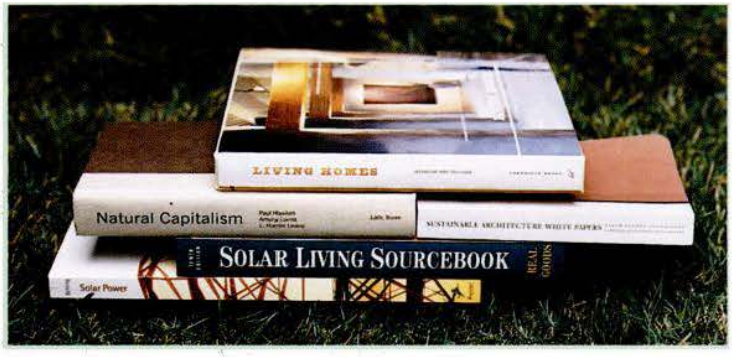
According to Bear Architecten's Tjerk Reijenga, this project is an example of the new wave of green architecture. "It shows that green architecture is not just straw bale construction or earth-integrated building," he says. "You can make green architecture that has a more contemporary, progressive expression."

The projects utilized sustainable building materials and water-efficient plumbing, but energy was the focus; the houses use 20 percent less energy than standard dwellings. Photovoltaic systems on each home were subsidized by the national government (40 percent) and the regional utility (30 percent). These return approximately 1.3 megawatts to the grid and provide some energy directly to the households. The Dutch government's Learning by Doing program funds such projects as a way to contribute to the knowledge and visibility of, in this case, the field of building-integrated PV.

Another Dutch project, City of the Sun, in Heerhugowaard Zuid, is being planned by Kuiper Compagnons and is set to break ground this year. Eventually, some 3,500 houses will be a part of this development, and planner and designer Ashok Bhalotra believes energy needs can be met on site via geothermal, PV, and heat pump systems (subsidized by the government). "The need will be about 4.7 megawatts and the community will be able to generate roughly 4.2," he explains.

Bhalotra believes that sustainability is related to many factors, not just materials and energy. Units will vary widely in price and size. "Mixing the population is critical," he says. "You must have room for singles, seniors, and families." Equally important is that the adjacent land will be preserved as forest, and another parcel is being developed for recreation; residents won't have to drive elsewhere for outdoor enjoyment. Bhalotra notes that City of the Sun will not impose a way of life on people that they don't want. "Asking people to change their way of living can be a big hurdle. I prefer to use seduction rather than compulsion—and inspire them to go further."

Kira L. Gould is a freelance writer in New York.



The Green Bookshelf

Sustainable Architecture White Papers
Earth Pledge Foundation, Series on Sustainable Development, 2000, $17
White Papers, with 324 pages and over 60 contributors, is not unlike the white pages, only with essays from numerous professionals offering their insights on sustainable architecture instead of addresses and telephone numbers (actually, a few of those are included as well). With concise articles such as "How a Mortgage Can Make a Difference" and "Seventies Solar: A Personal Account," there's something for everyone in this surprisingly readable book.

Solar Power: The Evolution of Sustainable Architecture
By Sophia and Stefan Behling
Prestel, 2000, $29.95
This solid book originated as a research study in Norman Foster and Partners' office. With the help of the European Commission's Renewable Energies Division, the firm has captured "the importance of the sun as the primary source of energy and its dramatic influence on architecture throughout the history of civilization" and distilled this overwhelming subject into 240 heavily illustrated pages. Don't judge this book by its cover (or its title).

Natural Capitalism: Creating the Next Industrial Revolution
By Paul Hawken, Amory Lovins, and L. Hunter Lovins
Little, Brown, and Company, 1999, $26
The authors proclaim in this sure-to-be classic that "the conventional wisdom is mistaken in seeing priorities in economic, environmental, and social policy as competing." With this ongoing and fundamental problem laid out before them, the authors launch into 15 exhaustive chapters presenting their plans and ideas for building a community and world based on what they refer to as "natural capitalism." That is, an economy centered on "four types of capital"—human, financial, manufactured, and natural. Examples include ways to recover "water from local biological treatment plants" and further implement the use of alternative wood fibers such kenaf, an "East Indian hibiscus similar to okra and cotton."

Solar Living Sourcebook (10th Edition)
Edited by John Schaeffer and Douglas Pratt
Real Goods Publishing, 1999, $30
Probably more than you ever wanted (or needed) to know about "composting toilets and graywater systems, disaster preparedness, passive solar design, and home energy conservation." But then again, given the current state of affairs (soaring gas prices, rolling blackouts) the thought of ditching the grid is gaining popularity. And if the idea becomes a reality, the *Solar Living Sourcebook,* packed with "technical details and thousands of products," may be the one book to have by your side when you finally decide to jump ship.

Living Homes: Sustainable Architecture and Design
By Suzi McGregor and Nora Burba Trulsson
Chronicle Books, 2001, $45
A well-researched, written, and photographed exploration of environmentally friendly homes made from materials such as adobe, rammed earth, and straw bale, *Living Homes* provides an unexpected look at private abodes whose residents have chosen to follow the tenets of sustainable architecture.

Gregory Kiss *has been actively involved in solar energy technologies and environmentally responsible architecture for over 20 years. He became a founding partner of Brooklyn-based Kiss + Cathcart Architects in 1983. In collaboration with Dutch architects Han Van Zwieten, Kiss + Cathcart designed the Ijsselstien rowhouses—photovoltaic housing in the Netherlands (left).*

INTERVIEWS:

San Francisco–based **Mary Lois Hare** *is an interior designer, floral designer, and artist who works with natural materials. She created the moss-covered couch seen on this month's cover, and* love me, love me not, *the sculpture at left, made from found objects and leaf skeletons.*

Architect **Darrel Deboer** *has extensive experience building houses and furniture with bamboo and other sustainable materials. Based in Alameda, California, he is the author of* Building Less Waste. *At left is a large bamboo fruit stand designed by Simon Velez in Colombia, South America.*

Pliny Fisk III *is co-director of the Center for Maximum Potential Building Systems (left), a nonprofit organization in Austin, Texas, that has been in the forefront of sustainable design and development activities since its inception in 1975.*

What is the feasibility of upgrading a house to a solar or photovoltaic-based energy system? How easily can photovoltaic technology become a normal part of what architects and builders do?
It's very feasible. As houses become bigger and bigger, they have more than enough roof area to get a significant amount of their power—or all of their power—from solar energy. And from an economic point of view, **the technology is continuing to get cheaper and cheaper**. The problem is that most architects don't think about energy at all when they design buildings. The tendency has generally been to make the most efficient sealed boxes that allow the mechanical systems to hum along as efficiently as possible. What I think is really kind of radically different about an energy-producing building or about solar energy is that it kind of forces you to flip your thinking right around. Once you do that you end up with a premise and a focus in your design approach that really should result in much more generous and expansive buildings that really do integrate themselves with the environment in a meaningful way.

It is inevitable that as these technologies become cheaper and more compatible with conventional or known building systems, they will work themselves into the mainstream of architectural practice. There has been tremendous progress in the area of cost since the beginning of the technology. But **solar products also need to work well in the building industry**. This is something the solar industry has been aware of for a number of years now and is finally beginning to do something about. There is a range of choice in flexibility now in terms of types of solar products that really can work in a construction environment. I think these are giving architects and engineers the kind of freedom they need to be able to integrate them into their buildings. ■

HOW DO YOU MAKE IT GREEN?

How can interior design be green? How can green thinking become more a part of our normal, everyday lives?
I encourage my interior design clients to use more environmentally responsible materials like recycled tile and bamboo flooring. There's a conflict with interior design, though. If I see horrible carpet in a client's house, I want to get rid of it, but then I remember it's got to go somewhere. So I try and find groups that recycle. There's a conflict on the most idealistic level just to be an interior designer. I should probably be telling clients, "I have a nice yurt for you." I do struggle with that. I use things from nature and found objects in my art and interior design work: rusty things, balls of twine, tea bags. **I have a particular affinity for moss**. I look at whatever is around and see a new life for it. I feel better using things that are already available. By using objects found in nature, those things deeply familiar to us, the art and design becomes more accessible and alludes to meaning in our lives.

I believe that creating things that are environmentally friendly or behaving in a way that is environmentally responsible comes from caring about the world we live in and caring about nature and our resources. It's necessary to have a respect and love for those things. I see the beauty and potential in many things and give mundane and seemingly useless objects a new life. I do this because I find these objects engaging and out of my innate sense of play. **I would like for my work to quietly remind us of our capacity to dream**. To me, the most beautiful things are not created by people, so when I use natural materials in my work, I feel I'm using the most beautiful things available. ■

Why do you like building with bamboo? Are there ways to make bamboo as common as a building material as you might find at, say, Home Depot?
Bamboo regrows very quickly. It's also probably the strongest building material we can work with. It's capable of making really long spans and it looks good. Because the bamboo pole is hollow, you have the advantage of not carrying around all that extra weight. All that stuff in the middle of the pole that one finds in a steel or concrete beam is called the neutral zone and it's just dead weight. Just by the nature of bamboo's shape it's about twice as strong as an equivalent solid piece of material would be. So it's a long-winded way of saying there are a number of advantages of this natural hollow shape that you don't get with standard materials. So it's a matter of being able to take advantage of those, and when you multiply that out over a large structure, it allows you to do much **bigger spans and much larger projects**. People who were told that it couldn't be done have been able to make 50- to 70-foot spans and 30-foot cantilevers from bamboo—and added a roof on top that's heavier than anything else you could imagine. There are about 1,500 species of bamboo. The Chinese describe the different species based not on what they're used for or what their physical/visual characteristics are, but what you do with them. Certain types are really good for weaving because they bend well; others work well for flooring; others work well as a truss member in a roof truss. It just depends on what you're looking for.

The ways you will see bamboo being integrated will be in simple substitutions for standard materials. Bamboo flooring, for example, is installed in exactly the same way as oak or maple. But taking it to the next level will be more of a challenge. You have to think differently when **you're building square buildings with a round material** and not everybody is willing to change their ways. The challenges are mostly cultural, so they'll most likely come about out of necessity because we're running out of the materials we're used to working with. ■

How did you first become interested in sustainable architecture and green design? Is there something that you're working on right now that you see as being as cutting-edge as your first straw-building workshops 14 years ago?
There are a lot of different reasons. One is the need for people to connect much more directly with their environment—in an aesthetic sense, in an informational sense, in what I call a "life cycle" sense. People should know where things are coming from, and where things are going, because it's that disconnect from a basic everyday forced-response relationship to the environment that we no longer have. And **it's not because we're bad people**, it's that we've created such a complex environment that we don't know what we're doing to it. There are many things builders can do to incorporate green practices. Buy local. Know your sources. Create what I call a new kind of old-boys club, which means people doing good work instead of people who are just doing work. Make sure that the design is communicating the values that you're trying to get across. Advertise what you're doing—that you're supporting the community. When you go to Anita Roddick's Body Shop, you can get literature showing the entire life cycle of how that soap, or hemp lotion, was made. You can find out who all the people are that you're supporting by the activities that you're doing. That mentality needs to be transferred into buildings.

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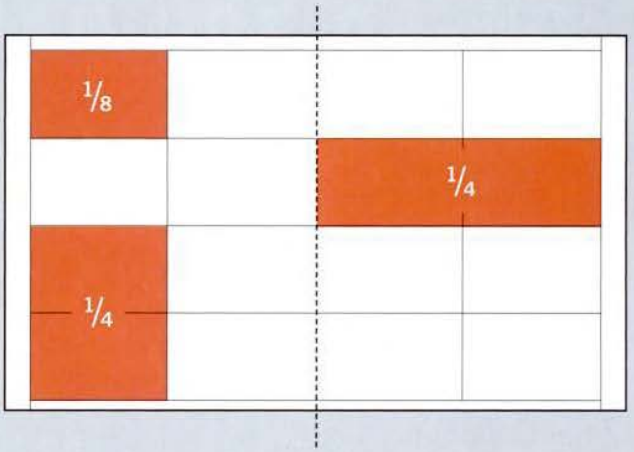

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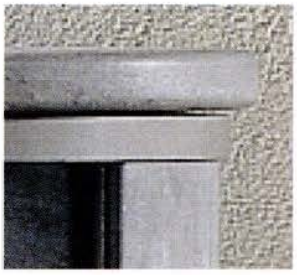

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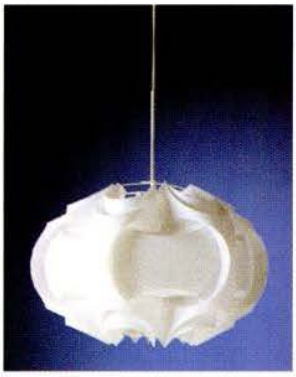

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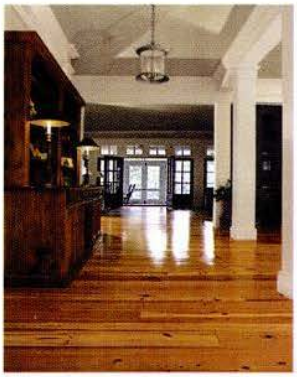

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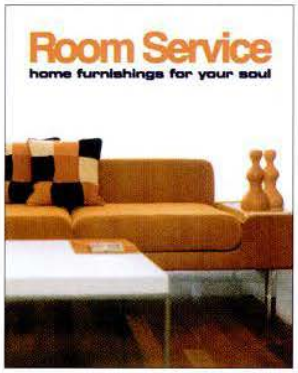

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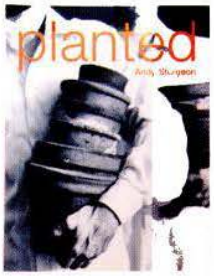

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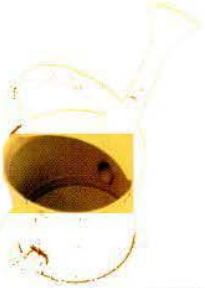
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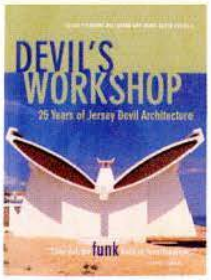

64


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Beautiful to look at, inexpensive to build: The LV Home seems almost primed for mass production.

PHOTO BY JULIO PEREIRA

MY MOTHER THE CONTRACTOR

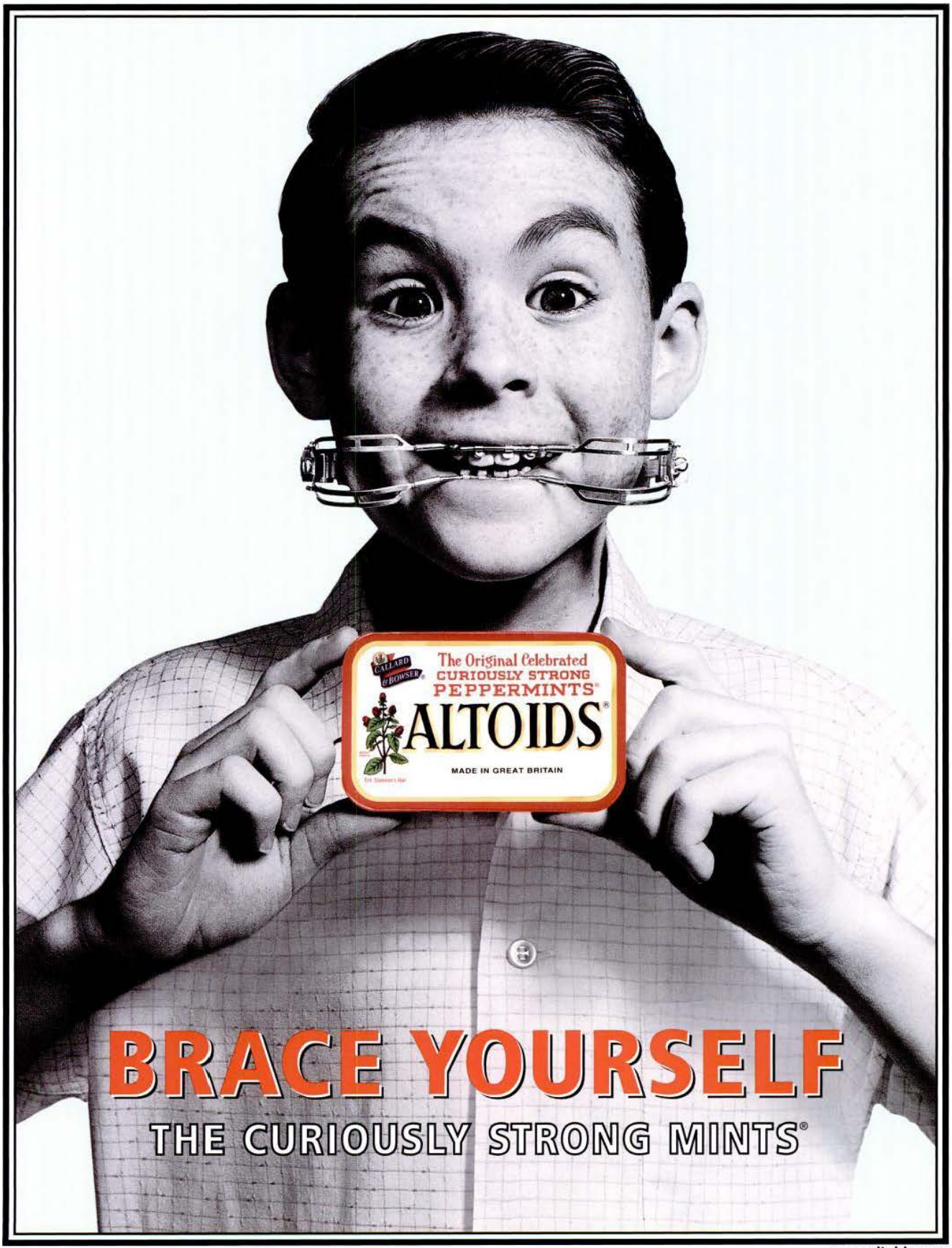
Budding architects often repay their parents for years of shelter and warmth by designing a house just for them. But in the case of architect and SCI-Arc professor Rocio Romero's first solo commission, the project was a familial tutorial in home building: While erecting a sea-view vacation home for his parents in his native Chile, Romero shared contracting duties with his mother, Soledad Valdes. She knows the construction business from the inside. Though she has no formal training, Valdes has, over the years, overseen numerous domestic renovations and structural extensions on family-owned buildings. "With my architectural experience and my mother's experience with construction in Chile," Romero explains, "we knew that we would make a good team."

The process got more knotted in family ties, as Romero's grandmother lives in the house adjacent to the site. Laguna Verde is a stretch of forested land that meets the sea abruptly to create dramatic vistas, but its remote setting complicated the logistics. Mother and son used grandma's house as the staging area, and the pair—along with the Santiago-based construction crew—lived with her throughout construction.

The resulting house was dubbed the LV Home: a modest (970 square feet) yet refined house, with light, durable, and shiny Zincalume (an aluminum/zinc-alloy-coated steel) cladding and a strongly right-angled plan that distinguishes the house from the verdant natural beauty around it. The indoor/outdoor boundary is virtually erased, thanks to high ceilings and continuous sliding doors on the seaward façade. The overall impression is of a modern-day Case Study House alighting on this picturesque site.

The family bonding, sleek design, and steely materials culminate in another bracing upside that can't be ignored: The whole project cost just $30,000, including subcontractors, room and board at grandma's, and the stainless steel furniture that Romero designed. "It was easy to keep costs down. The materials chosen were very cheap. And since my mother and I did all of the general contracting for the project, we ended up saving a lot of money, of course." Perhaps the democratic ideals of the Case Study program are once again coming into view. Or maybe the LV Home represents the simple truth that anything is possible with a little help from mom.

—ALAN RAPP



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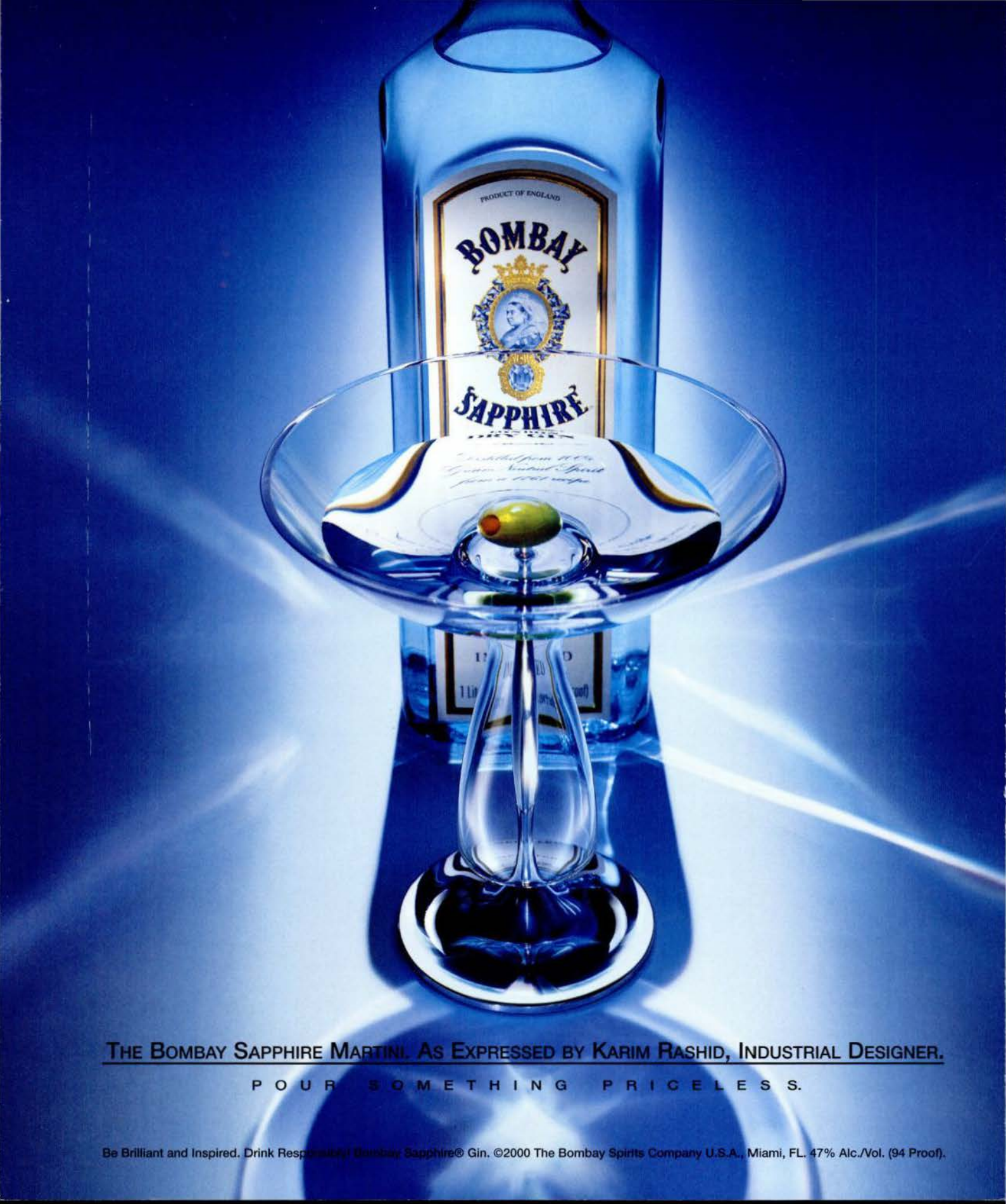

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