



## Re-Designing Good Design

William Leddy, FAIA

above and next page: 1991-98, Jean-Marie Tjibaou Cultural Center, Nouméa, New Caledonia. Client: Agence pour le Développement de la Culture Kanak; Renzo Piano Building Workshop, architects.

Competition, 1991. Consultants: A. Bensa (ethnologist); Desvigne & Dalnoky (landscaping); Ove Arup & Partners (structure and ventilation); GEC Ingénierie (cost control), Peutz & Associés (acoustics), Scène (scenography)

Preliminary Design, 1992. Consultants: A. Bensa (ethnologist); GEC Ingénierie (cost control); Ove Arup & Partners (structural & MEP engineering concept); CSTB (environmental studies); Agibat MTI (structure); Scène (scenography); Peutz & Associés (acoustics); Qualiconsult (security); Végétude (planting)

Design Development and Construction phase, 1993-1998. Consultants: A. Bensa (ethnologist); Agibat MTI (structure); GEC Ingénierie (MEP engineering and cost control); CSTB (environmental studies); Scène (scenography); Peutz & Associés (acoustics); Qualiconsult (security); Végétude (planting); Intégral R. Baur (signing)

*“Our own epoch is determining, day by day, its own style. Our eyes, unhappily, are unable yet to discern it.”*

—Le Corbusier, 1923, *Toward a New Architecture*

### Architecture for a New Epoch

In the early 1920s, as the rapid industrialization of the early Oil Age gained momentum, Le Corbusier and his contemporaries famously called for a new architecture worthy of their heroic time. It was a period of seemingly limitless natural resources, human ingenuity and industrial power, which demanded bold, new expression. In spirited response, architects produced sheer glass towers and gravity-defying forms that defined architectural aspirations for generations to come.

Today, we find ourselves in different circumstances. Poised at the beginning of the end of the Oil Age, we are entering a new epoch of shrinking resources, climate change and increasing global peril. Our uncertain future demands a new generation of innovative, net-zero energy and carbon-neutral buildings. Yet, a quick review of the current architectural press suggests that our deepest notions of architectural beauty may still be grounded in our cheap-energy past. Sheer glass towers display sensuous new twists and gravity-defying forms have taken on ever-greater degrees of gymnastic exuberance. Increasingly, we may find a high-tech frosting of photovoltaic arrays or wind turbines applied to denote a “green” agenda. But, much like their early Modernist predecessors, many of today’s most celebrated buildings express little more than the enormous technological power and fossil fuel resources required to design, build and sustain them.

As we stand at the threshold of a new era, the time has come to ask the question again: How can our architectural values and aspirations adapt more fully to the challenges of our epoch? How can we move beyond superficial expressions of “green” to develop an architecture that realizes the pragmatic and poetic potential of engaging the world around us? How can we harness the transformative power of design to help lead our society to a sustainable future?

### Green Sheen

“Recycle, reduce, reuse.” The great irony of the environmental movement in the U.S. is that, while explicitly opposing our consumer-driven society by striving to do more with less, it is none-



theless on the verge of being co-opted and trivialized by consumerism and the media. A Google search of “green design” yields over 140 million results. According to Thomas L. Friedman, “green” was the most trademarked word in the nation in 2007—proof that we’re caught up in a superficial “green revolution (where) everyone’s a winner, nobody has to give up anything, and the adjective that most often modifies ‘green revolution’ is ‘easy’.” He observes that “It’s all about looking green,” when we should instead be making hard choices and lasting changes in our way of life. Indeed, “greenwashing”—making false or misleading claims about the environmental responsibility of products and services for marketing purposes—is rampant, as airlines, automobile manufacturers, and even oil companies spend millions to convince consumers of their environmental righteousness. Twenty-first century America is absolutely awash in “green.”

It should come as no surprise, then, that “green” anything (and particularly “green” architecture) might be perceived as a fashion trend at best and a cynical marketing ploy at worst. A recent article, “The Bad News About Green Architecture,” *Newsweek’s* Senior Editor for the Arts, Cathleen McGuigan, flatly observes: “I hate green architecture. I can’t stand the hype, the marketing claims, the smug lists of green features that supposedly transform a garden-variety new building into a structure fit for Eden.” She goes on to say, “What bugs me most about the fad for green architecture is the notion that virtue makes for better design . . . Sustainability is about the practical systems of building, not the beauty of great design.”

McGuigan is correct to observe that the deployment of sustainable design features is not, by itself, sufficient to raise a building to the stature of great architecture. But her piece also illustrates two commonly held misconceptions: that great design results only from a quest for visual “beauty,” and that sustainable design is not only a fad, but a “practical” one at that. In fact, truly great design is both beautiful and practical. Its beauty is derived in part from an elegant utility. Its practicality is enhanced by an inspirational, poetic and intuitive character that invites repeated use. Springing from this marriage of pragmatism and poetry, great design connects us powerfully to the world around us.

### The Balkanization of Design

The idea that good design and sustainable design are two different things is still quite common among non-architects. More shocking perhaps, given the continuing reports of our degrading biosphere and the enormous exposure recently afforded sustainable design, is how persistent this viewpoint is among architects. Although attitudes are slowly changing, our highest aspirations for architectural expression still seem preoccupied with seeking the latest version of visual “beauty,” with only a cursory nod to larger environmental consequences. While architecture schools continue to introduce rigorous environmental systems studies within their curricula, this critical information is too often relegated to the periphery—regarded more as a practical matter of engineering than a deeply rooted element of core architectural design values. Within the profession, large architectural firms around the country still have “Sustainability Officers” who struggle to interest their top designers in pursuing even the most basic resource-efficient strategies. But the disconnect between good design and “green” design is perhaps most disturbing at the pinnacle of our profession, where only a small handful of the world’s most admired architects—Renzo Piano and Glenn Murcutt notable among them—have successfully integrated a deeply sustainable sensibility within the broader language of their architectural expression. When it comes to the most important issue of our time, too many of our most celebrated architects—the thought leaders of our profession—are still missing in action.

Conversely, architects focused on designing high-performance buildings sometimes appear to privilege engineering efficiency over the inspiration of the human spirit. At a time when our society desperately needs both innovation and inspiration to help guide our transition to the post-carbon age, this balkanization of design is an attitude we can no longer afford. Just as every good building must resist gravity, provide shelter and speak to our spirit, every building must now integrate advanced resource efficiency and celebrate our existential relationship with the natural world around us. Deeply integrated sustainable design can no longer be considered an optional



2000-2008, California Academy of Sciences; San Francisco, USA

Client: California Academy of Sciences. Renzo Piano Building Workshop, architects in collaboration with Stantec Architecture (San Francisco)

Consultants: Ove Arup & Partners (engineering and sustainability); Rutherford & Chekene (civil engineering); SWA Group (landscaping); Rana Creek (living roof); PBS&J (aquarium life support systems); Thinc Design, Cinnabar, Visual-Acuity (exhibits)

General contractor: Webcor Builders

accessory; it must now be included as standard equipment.

### Re-Designing Good Design

One way to weave resource efficiency more fully into our architecture is simply to strive for greater facility and creativity in our craft. We can always find better, more elegant ways to integrate design elements, such as effective daylighting, sun shading, renewable energy systems, and efficient material use. Innovative building technologies will continue to support these efforts, but reliance upon technology alone to address the difficult challenge of achieving carbon-neutral buildings may prove inadequate. Another, perhaps equally important approach is to reshape our architectural aspirations so that they more closely reflect the evolving conditions of our challenging time. As we begin to build the high-performance buildings our future demands, we will surely find that many of the architectural rules of the energy-rich 20th century no longer apply.

What is good design in the 21st century? Are energy-intensive glass façades still an appropriate building envelope regardless of the climate, even with the most advanced glazing systems? Perhaps we should reconsider the Modernist ideal of maximum visual transparency and rediscover the beauty of discrete openings in solid walls. Is the embodied energy invested in complex formal expression a responsible use of increasingly limited fossil fuel resources? Formal expression could become more relevant and meaningful by responding more directly to ecology than ideology, mining the expressive potential of microclimate, regional materials, pre-fabrication and design for de-construction. Are elaborate architectural elements built solely for aesthetic effect an appropriate use of materials? Simple design solutions that derive multiple practical and aesthetic benefits can be both elegant and resource-efficient. Should designing new buildings continue to be the nearly universal ambition of architects everywhere? The enormous environmental and cultural benefits of recycling the embodied energy of existing buildings through adaptive reuse and renovation could be far more effectively promoted within our profession and our communities.

The result of such critical inquiries into our most fundamental architectural values could have surprising results, helping to fully integrate “green” design and good design. Reconsidering these values could also help us to explore a largely untapped promise of sustainable design. By responding more intimately to the fundamental qualities of each site—the passage of the sun, the changing seasons, the ebbs and flows of water and wind, the careful use of materials found near at hand—high-performance buildings have the potential to anchor us more profoundly in our place. “Architecture comes into being when a total environment is made visible,” Christian Norberg-Schulz wrote nearly thirty years ago. “We have seen that this is done by means of buildings which gather the properties of the place and bring them close to man.” When our built environments are carefully woven within the fabric of their genius loci, the earnest lists of sustainable design strategies become subsumed within an overarching architectural experience that brings people closer to each other and to the natural world that sustains us all. In this way, the transformative power of design can be harnessed to inspire environmental awareness, responsibility and stewardship. Every building can become a billboard for a hopeful, just and sustainable future. Like our early Modernist ancestors, we have the capacity and the responsibility to seek a new architecture for our own time.

*“The 19th century was about new kinds of construction. And the 20th century created a language for that. Now architects must develop an aesthetic for our discovery about the fragility of nature.”*  
—Renzo Piano, 2008