In the last ten years, the museum world has experienced a building boom. A poll taken by the Association of Art Museum Directors indicated that 86 of its 175 members were planning or had begun expansions by 2006. It has become something of a beauty contest, as museums select different building strategies to gain the attention of architecture critics, art aficionados and tourists. Some have decided that extreme architecture will sell. In commissioning Daniel Libeskind to design its flamboyantly sculptural, technologically complex Frederic C. Hamilton Addition, the Denver Art Museum (or DAM as its known locally) has leapt to the forefront of this contest to win critical and financial success.

This building boom has been accelerated by what has become commonly known as the Bilbao Effect, named for the Guggenheim branch in Bilbao, Spain, masterminded by that museum’s former head Thomas Krens. Since its opening in 1997, Frank Gehry’s spectacular, titanium-clad sculpture has brought world-wide publicity, tourism and prosperity to a once ignored and neglected industrial city. 8 million visitors came between 1997-2006, at a rate of between 800,000 to 1 million per year, more than half of whom were from outside Spain. The accounting firm of KPMG reported that in 2001 alone the Guggenheim Bilbao created 149 m of gross domestic product, 24 m in additional revenue for the Basque Treasury and maintained 4,415 jobs. Since Bilbao, regional planners, politicians and museum administrators worldwide have considered how they could duplicate this success, selling the art museum as a key component in urban redevelopment efforts. The DAM has become a key test case for the Bilbao Effect in North America.
The DAM originated in 1893, as the city began to acquire wealth through mining and agriculture. Before World War II, the museum collected whatever it could afford and obtain, most notably Native American and Western art, housing its collection in various hand-me-down buildings. After 1950, prosperity created by the oil and gas industries and the relocation of federal jobs to the city fueled the growth of the DAM’s collections; by 1965, the overcrowded museum could exhibit only 2% of its renowned Native American and Pacific Islander collections, a fact oft-repeated by those campaigning for a new museum.

6 Ponti Museum

Directly foreshadowing the Bilbao Effect rhetoric of the late 1990s, ambitious Denverites of the ‘60s planned the construction of a spectacular new museum that would reflect new civic ambitions. DAM director Otto Bach emphasized that the addition would direct worldwide attention to the DAM and Denver, attracting donations and bringing in tourists. Businessmen and columnists wrote in local papers that a new museum would improve the city’s ability to compete economically. One wrote in the Denver Post in 1966: “It persuades visitors and tourists to stay a bit longer, influences the location of new businesses and industry, and attracts individuals looking for a culturally aware community in which to settle.”

7 Gio Ponti Portrait

In order to make a splash, DAM’s trustees decided that their local architect, James Sudler Associates, would work with a “leading European master.”

Sudler insisted on the selection of the Italian architect, Gio Ponti, founder of Domus magazine, a renowned industrial designer, and creator of such significant buildings as Milan’s Pirelli Building and the Taranto Cathedral. Importantly, Ponti, like Daniel Libeskind, had not designed a large-scale building in the U.S., making the DAM a trailblazer.

8 Pirelli Building

9 Denver Ponti Section and Plan

Bach presented Ponti, Sudler and his associate Joal Cronenwett with a clear program; he wanted a practical design that stressed the vertical rather than horizontal dimension. Administrators reasoned that the average museum goer had a 45-minute attention span, and that walking down the long corridors of a horizontal museum wasted precious time. As a result, the three architects, with Ponti as the lead, created a design consisting of two square towers, each 6 stories high, joined at their corners by a central elevator/utilities core. Stepping off the elevator, visitors could proceed immediately to any of the 11 galleries. In total,
Ponti’s design contained 210,000 sf, with each gallery designed to have flexible wall and ceiling dimensions.

10 Ponti Model

The exterior incorporated most of the design tenets that Ponti had developed in the 1950s-60s. The building emphasized volume over mass, with the thinness of its curtain wall emphasized. Rather than monolithic rectilinear walls, the building bent to create a 28-sided form. Ponti broke the façade into sections to emphasize the vertical dimension and to make each part different and memorable. He didn’t approve of the monolithic repetition of Denver’s modern skyscrapers; “sameness is a renunciation,” he stated. At the request of curators, natural illumination was kept out of most galleries; windows vary in dimension admitting light into service spaces primarily.

11 Ponti Exterior

Where there are projecting windows in galleries, Ponti framed mountain or cityscape views.

He frequently used diamond-shaped ceramic tiles to create a skin that reflected light in varying ways depending on one’s vantage point. “The effect of architecture depends more on surfaces than on masses: it is to be found in the reflections from the ceramic tiles, magical and not static, in their appearance and disappearance according to the direction of one’s gaze.”

12 Ponti tiles

While critical reception of the Ponti Museum, which opened in 1971, was often harsh, the building got worldwide attention. Many decried the structure’s inhospitable fortresslike character. One local newspaper called the work “monstrous” and others dubbed it “Alcatraz of the Rockies” and an “Italian castle covered in aluminum foil.” Ponti himself did not intend for the building to look fortresslike, but he didn’t mind the characterization, believing that art had extraordinary value and that it should look protected. It’s ironic that Ponti hoped to emphasize the lightness and thinness of the curtain wall, but the public read it as massive and impenetrable. The Ponti building did have its admirers, however, and it functioned serviceably for 35 years.

13 Ponti vs Irish Medieval Fortress

Since its construction, Denver has seen a booming oil economy during the 1970s and an oil bust in the 1980s. In the 1990s, it rebounded, with technology companies sprouting up in the region. Wealth accumulated and the museum got its share, putting much of its collection budget into available and affordable
contemporary art. By the late 1990s, the DAM began to outgrow the Ponti building and museum administrators again lobbied for a new facility. A proponent from the Denver Visitors Bureau, cited the success of Bilbao and predicted that a new addition would “make Denver a destination city, in the league of a Chicago or San Francisco [and] bring 250,000 new visitors and up to US $100 m into the city.”

14 Libeskind portrait

Following a competition held in 2000, the DAM’s Trustees picked Daniel Libeskind, the highly publicized designer of the Jewish Museum in Berlin. In Libeskind’s case, they selected one of the most intellectual and extreme deconstructivist architects currently practicing, one gifted at presenting his work from novel and provocative perspectives. He had a nomadic early existence, having been born into a Jewish family in Lodz, Poland, the son of Holocaust survivors. From an early age, Libeskind had been haunted by reminders of the Holocaust, of being one of the very few Jews speaking Yiddish left in Lodz. When he was 11, his family emigrated to Israel where it stayed two years. Here, too, he felt out of place, and was discouraged from speaking Yiddish where Hebrew was the state language. His family then left for Brooklyn, where he excelled at music, drawing and academics. Libeskind graduated summa cum laude from Cooper Union and earned an MA at the University of Essex in the UK, where he absorbed contemporary philosophy, linguistics and literature.

Libeskind in his writing and work, reveals a broad intellect drawn to balancing oppositions, and a keen appreciation for life’s existential strangeness, its potential for great joy and for terrible suffering.

15 Jewish Museum, Berlin, Germany 2001

He has developed a consistent deconstructed aesthetic, a formal vocabulary both vital in its energy but violent in its sharding. His buildings often display straight lines contrasted with thunderbolts, or stable crystalline forms cracked and tilted.

16 DAM Interior and Ext Views

Interiors have, in the architect’s words, “Walls which turn into floors which become roofs,” imposing on the visitor’s balance and inviting vertigo. He wants the visitor to feel his building’s imbalances to experience them fully.

17 Denver Art Museum Plan and Exterior

For the DAM’s Hamilton addition, his designed a series of crystals, tectonically uplifted in a manner echoing the projecting crust of the Rocky Mountains. Like Gehry’s Bilbao design, the DAM has a wild, discordant array of shapes all sheathed in titanium. Libeskind’s structure, like Gehry’s, had a very complex design, with few vertical members that posed an extreme challenge for the building’s structural
engineers, Arup, and contractor, M.A. Mortenson, who both collaborated on Gehry's Walt Disney Concert Hall in Los Angeles, one of the most challenging construction jobs of the 1990s. Arup and Mortenson learned a great deal from Disney Hall, where they refined their use of CATIA software not only to model the design’s structure, but also in the very difficult process of construction scheduling. Without this computer software, neither building could have been erected.

Critics have been profoundly mixed in their responses to the Hamilton wing; the New York Times’s influential Nicolai Ouroussoff criticized the building’s overly aggressive, sculptural qualities: “In a building of canted walls and asymmetrical rooms -- tortured geometries generated purely by formal considerations -- it is virtually impossible to enjoy the art.”

18 Denver Art Museum Interior 4 Views

Others pointed out how museum staff had deflected museum-goers away from bumping into canted walls with floor boards and other obstructions. The design’s structural complexity has already resulted in significant leakage and condensation problems. And how will the maintenance staff be able to clean the unorthodox tilted surfaces and sharp edges so vulnerable to hand prints and shoe scuffs?

19 Denver Art Museum Interior Wall Marks

20 Attendance Shortfall

One critic grumbled that the building, which cost local taxpayers $62.5 m, overemphasized the exterior’s flamboyant shapes at the expense of interior design and finish work. Many interior surfaces--particularly large expanses of drywall--do seem cheap and less than durable.

Angled walls kicked inadvertently by possibly dizzy visitors already are chipped in some spots. Irritation over building costs intensified when 14% of the museum’s staff was laid off in 2007.

More positive critics have focused on the energy and originality of the Libeskind design; Richard Lecayo wrote in Time 2006 that the DAM “…is the most captivating building to appear in the U.S. in a while, the first to compare in complexity, daring and brave-new-world beauty to the Walt Disney Concert Hall in Los Angeles that Frank Gehry set loose three years ago. If anyone doubts that Libeskind's ideas are a route to a powerful new model of space and form--and there are people who still think of his work as eccentric grandstanding--this is a building to change minds.”

On a more practical level, some noted how well the Hamilton addition allows for the transportation and storage of works of art. Freight elevators are close by to galleries, and each exhibition area has storage space set aside for packing crates.

21 Denver Art Museum Plaza Views
Many observers have lauded the way in which Libeskind sited his museum and nearby condominium mixed-use project in relation to the Ponti building, Michaels Graves’s 1995 library, and a parking garage. He skillfully created a pedestrian plaza and shielded the garage from view by wrapping the condos in front of it. On the negative side, however, Libeskind’s additional Civic Center landscaping plans have been scuttled, due to the recent popular outcry against them.

Most of the harshest critics voiced a preference for what Martin Filler has called the “Quiet Museum” rather than a wildly sculptural, distracting environment. Architect Richard Gluckman, who designed the Philadelphia Museum of Art’s new Perelman Building, stated in 2007: "It is possible to have a spectacular building that is perceived as quiet. Spectacle and content aren't mutually exclusive.” Having toured the building, I must agree with a preference for a more quiet design, one that balances 3 factors: technological experimentation, sculptural vigor with formal subtlety and refinement. A good example of this is the Glass Pavilion at the Toledo Museum of Art.

22 Glass Pavilion Toledo Museum of Art

Above all, a museum should not constantly impose itself on the art. While some pieces of art—especially minimalist, op art and conceptual pieces, do seem well highlighted by the disorienting movement of canted walls, many appear to me overwhelmed. I also wonder how adaptable the new wing will be to handle traveling exhibitions over the years. Despite these flaws, one has to be impressed by the doggedness of the DAM to build something radically new. Here and elsewhere in the city, Denver has demonstrated its resolute and enlightened commitment to supporting its cultural institutions.
The 4-story Hamilton Addition added 146,000 sf, almost doubling the institution’s size. 40,000 sf was set aside for the permanent collection, and 3 special exhibition galleries got 20,000 sf each. Remaining space was allocated for the dramatic lobby, a 280 seat auditorium, and the all-important, cash-generating museum shop.

Denver has made a strong statement by placing the two museums and its library addition by Michael Graves of 1995 at the heart of the city, in the Civic Center. The *Architectural Record* reported in 2001: “With Ponti’s museum and the adjacent Denver Public Library (designed by Michael Graves), Libeskind’s addition will form a sort of trinity of architectural design of the last 30-plus years.” Partial funding for the City of Denver’s strong commitment to the arts is its Scientific & Cultural Facilities District tax that raises $40 million a year for local art, music, theater, dance, and history organizations.

Some critiqued the architect’s elaborate rationalizations for his similar crystalline designs. For the DAM, Libeskind indicated that he had derived inspiration for its form from flying over the Rockies. For the similarly jagged Royal Ontario Museum’s Crystal addition, Libeskind claimed that the gems in the museum’s collection influenced his formal choices.