The Louvre Abu Dhabi: Before, Now, and After

Kaya Waltzer

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After passing through the unassuming parking lot, security, ticketing areas, and museum shop, visitors to the Louvre Abu Dhabi enter the structure's plaza, where the domed village is finally in view. They note the lack of walls, and the spectacular silvery dome of geometric lattice patterns that covers the individual galleries and pavilions. Light perforates through the dome, casting intricate, constantly changing shadows. Visitors may ponder which building to explore first, with 55 different low-rise structures to choose from. Or they may choose to wander through the walkways, taking in the dappled light and framed views of the Abu Dhabi skyline. At Jean Nouvel's Louvre Abu Dhabi, there are many different possible paths that visitors can take to experience the museum's art, and its delicately crafted visual relationships between water and light. This is a building that cannot exist elsewhere, as it is very much of its place, even with its association with its European counterpart. A lot of time and effort went into the building's planning and construction, and now it is open for people to explore. However, there is a larger question of how this building and its location will affect Abu Dhabi's future.

As part of a strategy to diversify the economy and inspire new generations, the United Arab Emirates decided to construct a new cultural district, called Saadiyat Island. The Louvre Abu Dhabi is only one aspect of this project, which also includes a performance center by Zaha Hadid, and other museums by Norman Foster, Frank Gehry, and Tadao Ando. As Mohamed Khalifa Al Mubarak, chairman of the Abu Dhabi Tourism & Culture Authority, said, Saadiyat Island is intended to "inspire a new generation of cultural leaders and creative thinkers to contribute to our rapidly-changing and tolerant nation." As a part of the United Arab Emirates, Abu Dhabi is engaged in a sort of cultural competition with other cities and countries within the

¹ George Webster. 2017. "Louvre Abu Dhabi: How a Monument Rose from the Sand." Www.cnn.com. December 2017. https://edition.cnn.com/interactive/2017/12/style/louvre-abu-dhabi/.

Gulf Cooperation Council, that Cynthia Schneider, a professor in the practice of diplomacy, argues is "reminiscent of the rivalry between Florence and Venice during the Italian Renaissance." Places like Doha and Dubai are also going through dramatic economic development and are investing in architecture. These places are recognizing the value and need for cultural institutions. Saadiyat Island can provide jobs for local people, and it can inspire a new generation.

The Louvre Abu Dhabi is the result of a deal between France and the United Arab Emirates, which was signed on March 6th, 2007. As part of the deal, the United Arab Emirates paid \$520 million to use the name of the Louvre for 30.5 years³. For reference, the UAE purchased the Guggenheim name for the same amount of time for 76 million euros⁴. As Anne Gombault and Didier Selles explain, museums can "capitalize on their brand—including cultural capital, reputation and prestige—for financial gain, while allowing new institutions and developing cities to quickly achieve their own brand, identity, legitimacy and public image world." Despite their shared name, the Louvre Abu Dhabi is a separate institution from the Louvre in Paris, which will loan artwork to its counterpart for 15 years. The museum in Abu Dhabi is a symbol of global relationships, like that between France and the United Arab Emirates. The structure itself has many locally inspired features, but also houses artworks and artifacts from all over the world, making it a universal museum.

² Cynthia P. Schneider. "Abu Dhabi and What It Means to Be a Global Cultural Capital." Georgetown Journal of International Affairs 13, no. 2 (2012): 99–106. http://www.jstor.org/stable/43134240. 99.

³Alan Riding. 2007. "The Louvre's Art: Priceless. The Louvre's Name: Expensive." The New York Times, March 7, 2007, sec. Arts. https://www.nytimes.com/2007/03/07/arts/design/07louv.html.

⁴ Seth Graebner. "The Louvre Abu Dhabi: French Universalism, Exported." L'Esprit Créateur 54, no. 2 (2014): 186–99. https://www.jstor.org/stable/26378905. 189.

⁵ Anne Gombault and Didier Selles. 2018. "Company Profile: Louvre Abu Dhabi: A Radical Innovation, but What Future for French Cultural Influence?" International Journal of Arts Management 20 (3): 83–94. https://www.jstor.org/stable/pdf/44989739.pdf?refreqid=fastly-default%3A0f8171157a91133e825f2d9f2 61bd3c2&ab_segments=0%2FSYC-6646_basic_search%2Fltr&origin=search-results&acceptTC=1. 88.

The Louvre Abu Dhabi is the Louvre's first attempt to branch out and develop franchises. This is interesting when compared to the Guggenheim, which has worked to create franchises around the world. To name a few, there is the Guggenheim Museum in New York City, the Guggenheim Museum Bilbao in Spain, the Deutsche Guggenheim in Berlin, and the planned Guggenheim Abu Dhabi. According to Gombault and Selles, the Guggenheim is motivated by purely entrepreneurial and financial reasons, while the Louvre, on the other hand, is "an influential power whose aim is to promote French culture in a particular geopolitical and cultural context." However, not everyone was supportive of the Louvre's new step. The art historian Roland Recht, alongside former curators Françoise Cachin and Jean Clair were among this crowd. They wrote an op-ed opposing the deal, arguing that "the Louvre housed and indeed embodied a version of French culture that the Republic must protect." They did not like the idea that the Louvre would be making money off cultural goods that belonged to France. Despite these protests, the museum completed the deal, with President Jacques Chirac and Minister of Culture Renaud Donnedieu de Vabres strongly supporting the partnership.

It is notable that this building, which embodies a relationship with France, was designed by a French architect. Pritzker-prize winning architect Jean Nouvel studied at the École des Beaux-Arts in Paris, and then went on to design cultural centers such as the Musée du quai Branly in Paris, the National Museum of Qatar, the Philharmonie de Paris, and Doha Tower. Nouvel does not have a specific style that he includes in all his buildings. As Hala Wardé, an associate architect of the project, explains, "He never does the same thing twice. You never see two buildings of (Nouvel's that) look like each other... Working with situations – this is what he teaches – is to make every project specific to where it is in terms of all the context,

⁶ Gombault and Selles, "Company Profile: Louvre Abu Dhabi," 86.

⁷ Graebner, "The Louvre Abu Dhabi: French Universalism, Exported," 187.

including the cultural (context), the history and the place itself." This makes Nouvel a desirable choice for designing cultural centers, as he is dedicated to designing buildings that are of their place. The Louvre Abu Dhabi is no exception. When Nouvel first visited the sight, it was only sand, the sea, and the sky, so he took these elements and combined them with Arab culture. He also incorporated multiple symbolic forms that refer to cultural features. For example, he took inspiration from local date palm trees in the design of the dome, and how it creates shadows. Like the leaves of the palm trees, light filters through the layers of the dome, creating a similar "rain of light." The dome itself is inspired by the cupola, which is a feature of Arabic architecture. In addition, Nouvel refers to the structure's plaza as its agora, and he modeled the pavilion from a medina, with individual buildings making up a "city" within the museum.

Because Nouvel tends to respond to the site, rather than employ similar forms, the Louvre Abu Dhabi is very different from other buildings he has designed. However, there are some common threads between Nouvel's buildings, as different as they appear. He tends to utilize light and geometry. For example, with the Musée du quai Branly, Nouvel's tendency to include geometric shapes is evident in the museum's cubic appendages, and his attention to natural light appears in the glass wall around much of the building that allows light into the galleries. In the National Museum of Qatar, intersecting disks and the few small windows that connect them once again stress these elements. Although the Louvre Abu Dhabi has a very different outward

⁸ Webster, "Louvre Abu Dhabi: How a Monument Rose from the Sand."

⁹ Webster, "Louvre Abu Dhabi: How a Monument Rose from the Sand."

¹⁰ Benjamin S. Koren Ruairi Glynn, and Bob Sheil. "Louvre Abu Dhabi: 1: 33 Light-Test Prototype." In Fabricate 2011: Making Digital Architecture, DGO-Digital original., 235–38. UCL Press, 2017. http://www.jstor.org/stable/j.ctt1tp3c6d.43. 1.

appearance from these two buildings, Nouvel once again used geometry and light as guiding architectural principles.

A visitor's visual experience of the exterior of the museum is conditioned by the relationship of the structure to the environment around it. Nouvel had the challenge of designing a structure that had to compete with the sparkling water of the Arabian Gulf, with Abu Dhabi skyscrapers on the horizon, and that could handle the harsh weather of the desert. With the Louvre Abu Dhabi, he rose to the challenge. Rather than trying to detract from the water, Nouvel incorporated it into his design. The building appears to float on water, as there are pools surrounding it, and throughout it. As Nouvel said, "The sea is extraordinary...when you have this great asset, it's like having a great card in a hand: you have to use it." Instead of building a tall structure that emulates Abu Dhabi skyscrapers, Nouvel created a low-rise museum city, that does not have to compete, and he incorporated framed views of the city throughout the museum. The dome makes the desert a backdrop, rather than a problem, as it converts harsh sunshine into patterned light, and it limits heat.

The construction of the museum took eight years. It was officially opened on November 11th, 2017. The dome itself is 590 feet in diameter. It is composed of eight layers of steel, with 7,850 repeating stars, and allows only 1.8% perforation. The dome appears to be floating, as it is supported by four piers, which the pavilions hide. Its geometry "consists of a space frame with top and lower chords lying on spherical surfaces," and Nouvel's team constructed a large-scale prototype to make sure the dome had its intended effect of detailed shadows. The dome was separated into 85 parts during construction and supported by towers until the pieces could

¹¹Josephine Minutillo. 2017. "Louvre Abu Dhabi by Ateliers Jean Nouvel." Www.architecturalrecord.com. December 1, 2017. https://www.architecturalrecord.com/articles/13121-louvre-abu-dhabi-by-ateliers-jean-nouvel.

¹² Minutillo, "Louvre Abu Dhabi by Ateliers Jean Nouvel."

¹³ Koren, Glynn, and Sheil, "Louvre Abu Dhabi: 1: 33 Light-Test Prototype," 3.

support themselves, as it weighs 7,500 tons.¹⁴ It has four outer and four inner layers. The outer layers are clad in stainless steel, while the inner layers are aluminum.¹⁵

Under the dome, there are 55 buildings that comprise the "museum city", 23 of which are galleries. ¹⁶ The buildings are white cube forms, clad in precast high-performance fiber concrete panels. ¹⁷ They are stunning in their simplicity and allow visitors to focus on the effect of light and water throughout the structure, rather than on the individual buildings. However, this simplicity is countered by the interiors of the galleries, which are lined with removable bronze panels. Once inside, the building does not need to compete with the effects of light and water. Based on the collection on the display, the stone of the floor changes, for example, using "Italian marble for the Renaissance galleries." ¹⁸ The galleries house bronze-framed glass display cabinets and blue-gray Belgian stone pedestals, and the ceilings are made of glass. Although from the outside, these galleries may seem like "the generic white box of so many museum galleries," the inside proves that they are far from it. ¹⁹

Although the dome produces a stunning visual effect, it is not only there for aesthetic purposes. The dome also plays a large part in controlling the Louvre Abu Dhabi's environmental impact, as it helps control the microclimate. Light can perforate the dome, but it limits wind and heat. Other aspects of the building that help control the microclimate are its stone floors and wall cladding. The gallery buildings are air conditioned, which is important for protecting the art, but Nouvel implemented efficient HVAC systems and a high-performance water-cooling system. In addition, the building has passive water and energy conservation systems. According to the

¹⁴ Webster, "Louvre Abu Dhabi: How a Monument Rose from the Sand."

¹⁵ "Architecture | Louvre Abu Dhabi." 2019. Architecture | Louvre Abu Dhabi. 2019. https://www.louvreabudhabi. ae/en/about-us/architecture.

¹⁶ "Architecture | Louvre Abu Dhabi."

¹⁷ Minutillo, "Louvre Abu Dhabi by Ateliers Jean Nouvel."

¹⁸ Minutillo, "Louvre Abu Dhabi by Ateliers Jean Nouvel."

¹⁹ Minutillo, "Louvre Abu Dhabi by Ateliers Jean Nouvel."

building's website, the Louvre Abu Dhabi is set to achieve Silver LEED status.²⁰ With the LEED rating system, projects earn points for how they address environmental issues with their building. Attaining a Silver LEED status involves earning 50-59 points, and it is above Certified LEED status, but below Gold and Platinum.²¹ This means that the building is definitely environmentally conscious, however, it is not at the height of sustainability that other buildings around the world have managed to achieve.

As a cultural center, but also a touristic one, it is important to consider the impact that the Louvre Abu Dhabi and the larger Saadiyat Island have on local people. Saadiyat Island should help with economic growth and create new jobs for local people. However, who does this island cater to? The development plan is projected to cost \$22-27 billion, and includes the museums and performance center, but also two golf courses, 29 hotels, and expensive private residences. This may be a cultural development for all of Abu Dhabi, but the people who will have the most access to it are the wealthy, and specifically, wealthy tourists. The government created the Tourism Development & Investment Company (TDIC), to oversee Saadiyat Island, yet there has been some controversy in the treatment of migrant workers throughout the construction of the cultural tourist destination. One report by Human Rights Watch outlines how migrant workers are exploited and abused. The TDIC has made efforts to combat this, "by contractually requiring employers to affirm that they do not engage in or support the use of forced labor, require employees to surrender passports, or withhold wages from employees." However, exploitation continues in the form of "employee-paid recruiting fees; visas controlled by employers; very low

²⁰ "Architecture | Louvre Abu Dhabi."

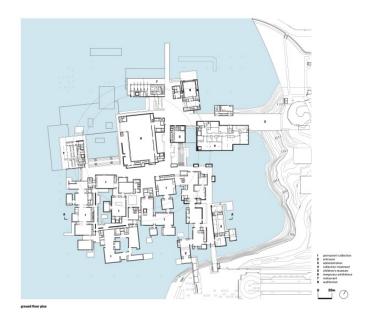
²¹ USGBC. 2020. "LEED Rating System." Usgbc.org. 2020. https://www.usgbc.org/leed.

²² Bill Van Esveld, and Human Rights Watch (Organization. 2009. "The Island of Happiness": Exploitation of Migrant Workers on Saadiyat Island, Abu Dhabi. New York, Ny: Human Rights Watch.
²³ Van Esveld, "The Island of Happiness," 1.

wages often far below what was promised workers in their home countries; and restrictions on organizing and no real access to legal remedies"²⁴. This is troubling to think about with such a big project. If the TDIC cannot protect migrant workers, will similar treatment extend to less wealthy locals, or to anyone who is not wealthy or a tourist?

Nouvel masterfully employed light, water, and cultural context in his design for the Louvre Abu Dhabi. There is no doubt that the cultural center is visually stunning, and people will surely visit to experience the museum and its art from all over the world. There are still, however, many questions about the structure's, and Saadiyat Island's futures. It remains to be seen when the rest of the multi-billion-dollar plan will be completed, and how it will affect Abu Dhabi for people from all backgrounds.

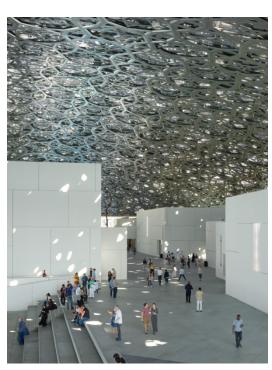
²⁴ Van Esveld, "The Island of Happiness," 1.



Floor Plan

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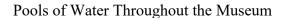
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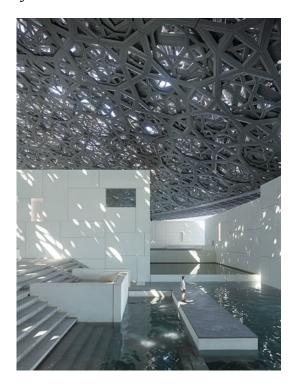


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