

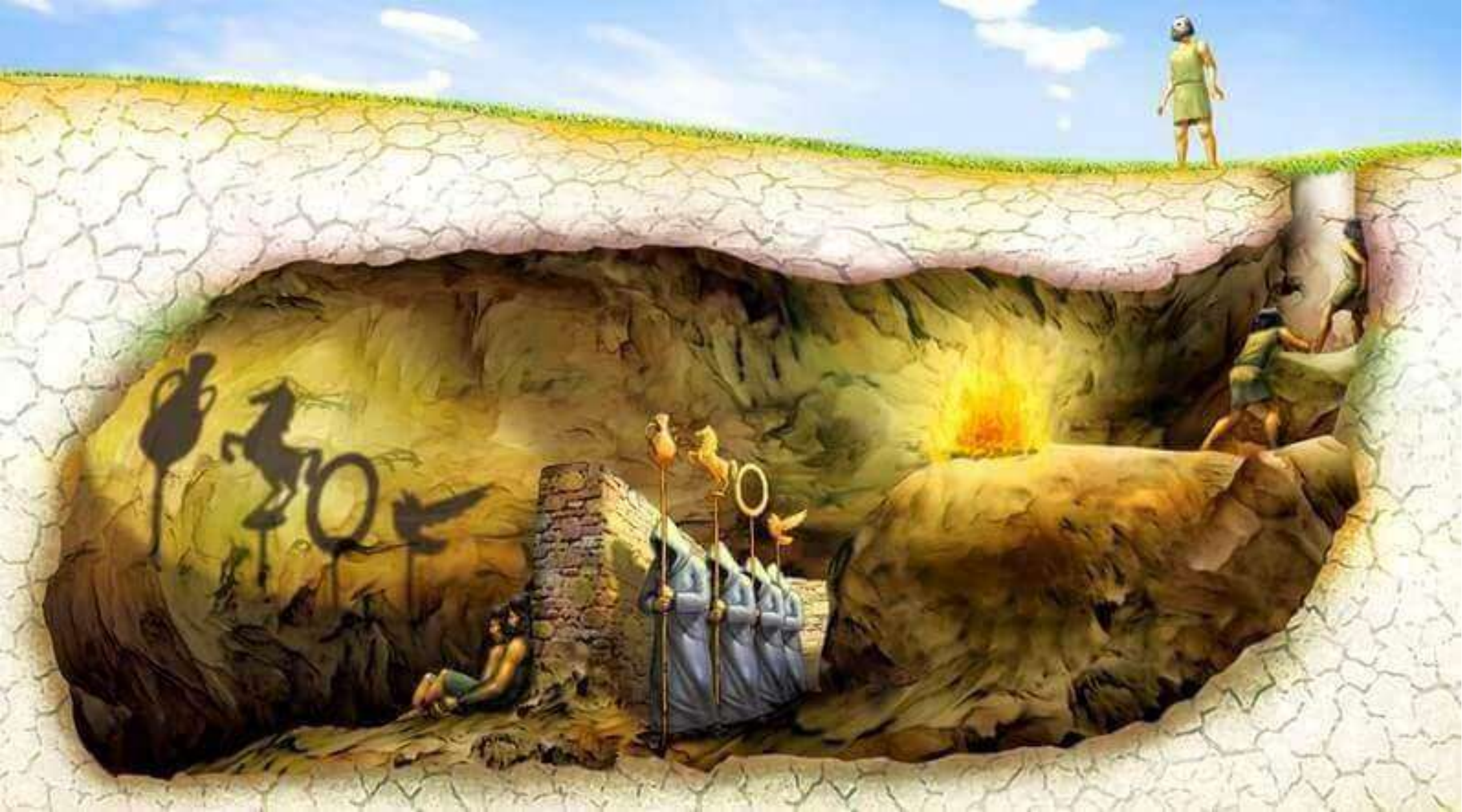
# The Light in the Cave

Oculus: Eye of Light

# Allegory of the Cave--Plato

The Allegory of the Cave, or Plato's Cave, is an allegory presented by the Greek philosopher Plato in his work Republic to compare "the effect of education and the lack of it on our nature". It is written as a dialogue between Plato's brother Glaucon and his mentor Socrates, narrated by the latter.

- <https://www.youtube.com/watch?v=1RWOpQXTItA&t=268s>
- <https://www.studiobinder.com/blog/platos-allegory-of-the-cave/>
- <https://www.youtube.com/watch?v=SWlUKJIMge4> (use this)



# The Roman Pantheon

The Pantheon in Rome is a true architectural wonder. Described as the “[sphinx](#) of the Campus Martius”—referring to enigmas presented by its appearance and history, and to the location in Rome where it was built—to visit it today is to be almost transported back to the [Roman Empire](#) itself. The Roman Pantheon probably doesn’t make popular shortlists of the world’s architectural icons, but it should: it is one of the most imitated buildings in history. For a good example, look at [the library Thomas Jefferson designed](#) for the University of Virginia.

- <https://www.worldhistory.org/Pantheon/> (use this)
- <https://smarthistory.org/the-pantheon/>













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# Andrea Mantegna—The Oculus

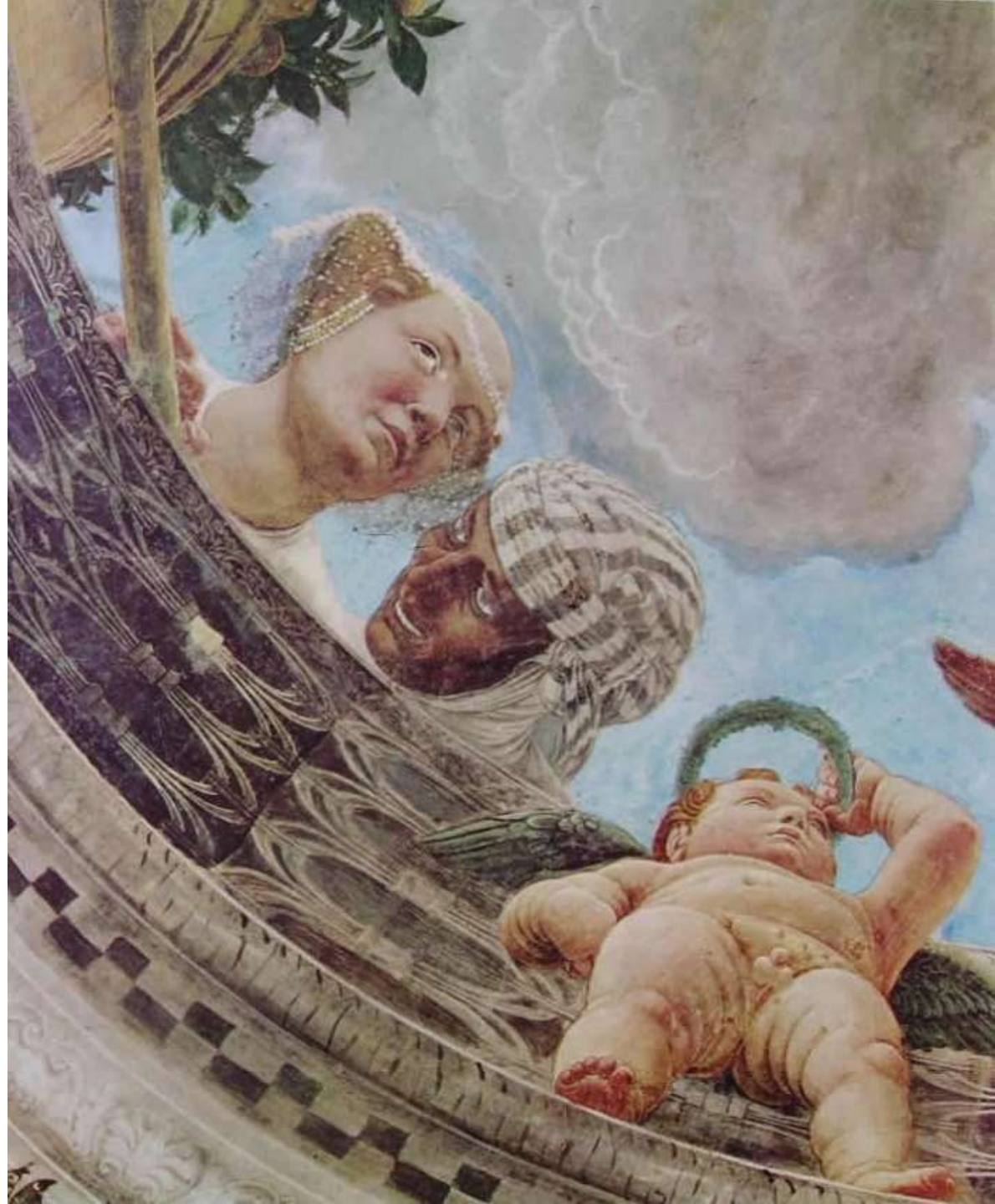
In some people's opinion, Andrea Mantegna was the forefather of the art of painting with an illusional magic, a style now used by many artists. 'Camera Degli Sposi - The Oculus' was perhaps one of his most intriguing works of art.

Mantegna's commission was to decorate the Camera Degli Sposi (the bridal chamber) of the Palazzo Ducale, home to the Gonzagas, Mantua's most powerful and influential family. Completed in 1473, the work consists of a painted, dome-like "lookout", or oculus, on the ceiling, with the scene continuing down the walls. It is not only a masterpiece in perspective, but also a skillful arrangement of portraits representing members of the Gonzaga family. The overall scene gives the viewer the illusion of looking up into the sky while fictional viewers are peering down into the room. The young cherubs and figures leaning over the balustrade represent some of the courtyard visitors who regularly made an appearance at the Palazzo Ducale, giving modern-day viewers a glimpse back through time at who was considered important enough to attend courtyard life. Mantegna needed to be exact in his sizing and in his use of light in order to bring a three-dimensional effect to a two-dimensional object.

The art work took Andrea Mantegna nine years to complete, and it is the only Fresco style art work that remains from Mantegna in its original location. The painting is also known as "trompe l'oeil", which literally translates from French to "fools the eye."

<https://www.youtube.com/watch?v=GN0P5RkQAow>







# Ra Paulette

For the past 25 years, Ra Paulette has been carving out man-made caves from the sandstone hills of New Mexico, and then sculpting these spaces into works of art he calls wilderness shrines. Lee Cowan has the story of an artist who does his best work underground.

- <https://www.youtube.com/watch?v=oxcftjJ39BU>















# James Turrell: Skyspace

*Dividing the Light*, a Skyspace by James Turrell '65, is perhaps the most glowing example of public art on the Pomona College campus. Opened in fall of 2007, the architectural installation heightens the viewer's awareness of light, sky and the activity of perception.

Called “one of the best works of public art in recent memory” by the *Los Angeles Times*, *Dividing the Light* gathers visitors on benches beneath a canopy that frames a window to the sky. At dusk and dawn a lighting program bathes the canopy in changing colors, from goldenrod to turquoise, altering the viewer's perception of the sky. One moment it's a dreamy lavender, another it's an ominous tablet of black. A shallow pool centered beneath the opening to the sky mirrors the daytime sky and reflects a dark echo of the night sky.

Turrell, known for his work in light, has built several Skyspaces around the world; this is the only one available for public viewing in Southern California.

<https://www.youtube.com/watch?v=Vbra1eKIYXQ> (Pomona College—no words)

- <https://www.youtube.com/watch?v=akKpEgoMeNY&t=26s> (good)
- <https://www.youtube.com/watch?v=L6XQBf-pd1E>
- <https://art21.org/watch/art-in-the-twenty-first-century/s1/james-turrell-in-season-1-of-art-in-the-twenty-first-century-2001-preview/>
- <https://art21.org/watch/extended-play/james-turrell-second-meeting-short/> (good)
- <https://www.youtube.com/watch?v=A4Hr9LOkAXU>
- [https://www.youtube.com/watch?v= BuJpDXkMz8](https://www.youtube.com/watch?v=BuJpDXkMz8) (use this)













# Wooden Cave

The Wooden Cave is a project by Tenon Architecture, that was designed and built by the architects Apostolos Mitropoulos and Thanos Zervos at the Hyades Mountain Resort in Trikala Korinthias, Greece, and was completed in 2020. The project entails the complete renovation of an existing space of the resort, intended for commercial use, with the construction of a curved wooden structure within it.

<https://www.archdaily.com/940816/wooden-cave-tenon-architecture>













# Jean Nouvel

The **National Museum of Qatar** is a [national museum](#) in [Doha, Qatar](#). The current building opened to the public on 28 March 2019, replacing the previous building which opened in 1975. The building was designed by architect [Jean Nouvel](#) who was inspired by the [desert rose crystal](#), which can be found in Qatar.<sup>[1][2]</sup> The museum site includes Sheikh Abdullah bin Jassim Al Thani's Palace, which is the heart of the Qatari national identity.<sup>[3]</sup> As of 2013, the director of the museum is [Sheikha Amna](#).

<https://www.youtube.com/watch?v=oV-nVX8jLWc&t=39s>

When NMoQ [opened in March 2019](#), architect Jean Nouvel described the design as "the first architectural structure that nature itself creates." But a lack of interior photos inside the museum made it unclear how deep such a statement was.

Although not designed by Nouvel, the cave-like spaces of the gift shop takes the nature analogy deeper: inside the museum and its exterior shell of interlocking disks. Architect Koichi Takada was inspired by Dahl Al Misfir (Cave of Light) in Qatar, designing fluid wood surfaces that echo the natural subterranean spaces.

- <https://www.world-architects.com/en/architecture-news/film/lighting-a-cave>













# Dhal Al Misfir

Dhal Al Misfir is a cavern that is a natural landmark in the Rawdat Rasid area of Qatar. The cave contains fibrous gypsum crystals. Its depth is anywhere from 40 meters to at least 100 meters.

<https://www.facebook.com/watch/?v=1266951017481769>



The image shows the interior of a cave, looking out through a large, irregular opening. The cave walls are composed of rough, layered rock in shades of tan and brown. The opening reveals a bright, clear blue sky. On the right side of the image, the text 'DAHL AL' is displayed in large, bold, black capital letters within a white rectangular box.

**DAHL AL**

**MISFIR**

**CAVE**









# American Museum of Natural History

A sculptural addition to the [American Museum of Natural History](#) encases the New York institution within a cavernous structure that captures the immensity of deep, geological time. The project of Chicago-based [Studio Gang](#), the Richard Gilder Center for Science, Education, and Innovation is a massive, dramatic space spanning 230,000 square feet with sweeping exhibition halls, a research library with a ceiling evocative of a gilled mushroom, a theater, and a five-story atrium filled with natural light.

Similar to the museum's Central Park West entrance, Milford pink granite cloaks the exterior, and the undulating cliff-like facade features windows of [fritted glass](#), a porous material that reduces glare, energy costs, and most importantly, the risk of bird collisions. The interior of the center mimics a hidden cave with walls that appear eroded by wind and water to reveal round, asymmetric openings, all of which are made with textured [shotcrete](#), concrete that's sprayed on an armature of rebar and metal mesh and then shaped. Designed as a system of loops to connect parts of the new wing with the existing building, the center's structure allows visitors to seamlessly flow from one space to the next.

<https://www.amnh.org/exhibitions/permanent/gilder-center>

<https://abc7ny.com/american-museum-of-natural-history-ricahrd-gilder-center-science-education/13188893/>











# Katie Paterson--Hollow

Situated within the Royal Fort Gardens at The University of Bristol, British designer [Katie Paterson](#) and architects [Zeller & Moya](#) collaborated on [Hollow](#), a wooden installation that illustrates the diversity of tree species found across the globe. From the outside the sculptural work appears as a series of rectangles made from a similar, light colored sample of wood, yet when one enters the modular elements break into wooden blocks of all shapes, sizes, and hues. Clustered rectangular structures emerge from the ceiling and floor of the cave-like public art piece like stalactites and stalagmites. The structures are composed of a range of wood samples, including ones that evolved millions of years ago to far more recent examples.

During three years of research and sourcing Paterson collected over 10,000 tree samples from various sources, including the [Royal Botanic Gardens, Kew](#), the [Arnold Arboretum](#) at Harvard University and [Yakushima](#), known as one of the wettest, forest-filled islands surrounding Japan. The collection also features a piece of wood from the [Indian Banyan Tree](#), a fig tree where Buddha achieved enlightenment, the [Japanese Ginkgo](#) tree, and the [Metuselah tree](#), found in the White Mountains in eastern California, which at 4,850 years old, is believed to be one of the oldest trees in the world.

*Hollow* is an ethereal environment for both play and meditation, and resembles a forest canopy with patches of light dappling in from the ceiling. The construction illustrates the detailed beauty of the natural world, and is poignant reminder of the importance of appreciating and maintaining our fragile natural environment. To step virtually into the permanent installation, visit *Hollow's* [website](#).

- <https://www.thisiscolossal.com/2019/03/hollow-royal-fort-gardens/>
- <https://vimeo.com/192114175>













# Architecture and Natural Light

- <https://www.re-thinkingthefuture.com/2020/06/17/a1059-10-examples-of-innovative-use-of-natural-light-in-architecture/>
- Tate Modern
- Royal Mosque at Isfahan
- Exeter Library New Hampshire
- Jewish Museum Berlin
- Thermal Baths Vals
- Wah Fu Estate Honkong



# Budapest

Budapest consists of two parts (areas), separated by the Danube, the plains of Pest, located on the East side of the Danube and the hilly area of Buda, located on the West side of the river.

That is a hilly-mountainous area of Buda hides a world of dungeons, consisting of caves and miles of a network of tunnels and passages built under the Buda hill on top of which is located the historical complex of the once majestic [Buda castle](#).

- <https://www.youtube.com/watch?v=DFFD RKZ0JyQ&t=64s>













# Zonguldak Caves Visitor Center / Yalin

## Architectural Design in Turkey

Gokgol Cave is located on the eastern slope of Ercek Stream, 5 km southeast of Zonguldak. Gokgol cave is one of the important caves in Zonguldak and Turkey that can be visited with its formations of stalactites, stalagmites, columns, flags, and curtains in various colors, textures, and sizes.

With the visitor center structure built, it is aimed to provide an advanced narrative, information, and guidance for other caves waiting to be discovered in Zonguldak geography. With the Zonguldak Caves Visitor Center, from the early stages of the design process, we aimed to establish a direct and one-off site-specific relationship as much as possible with the front of the Gokgol Cave and its immediate surroundings. Visitor center's architectural approach; is to establish a consistent architectural language that can exist without competing with the surprising existence of the piece of nature that has taken its current form after millions of years of natural formation processes.

<https://www.archdaily.com/967680/zonguldak-caves-visitor-center-yalin-architectural-design>













# India—Buddhist Caves

- <https://www.youtube.com/watch?v=rkkNHUeRdao&t=163s>

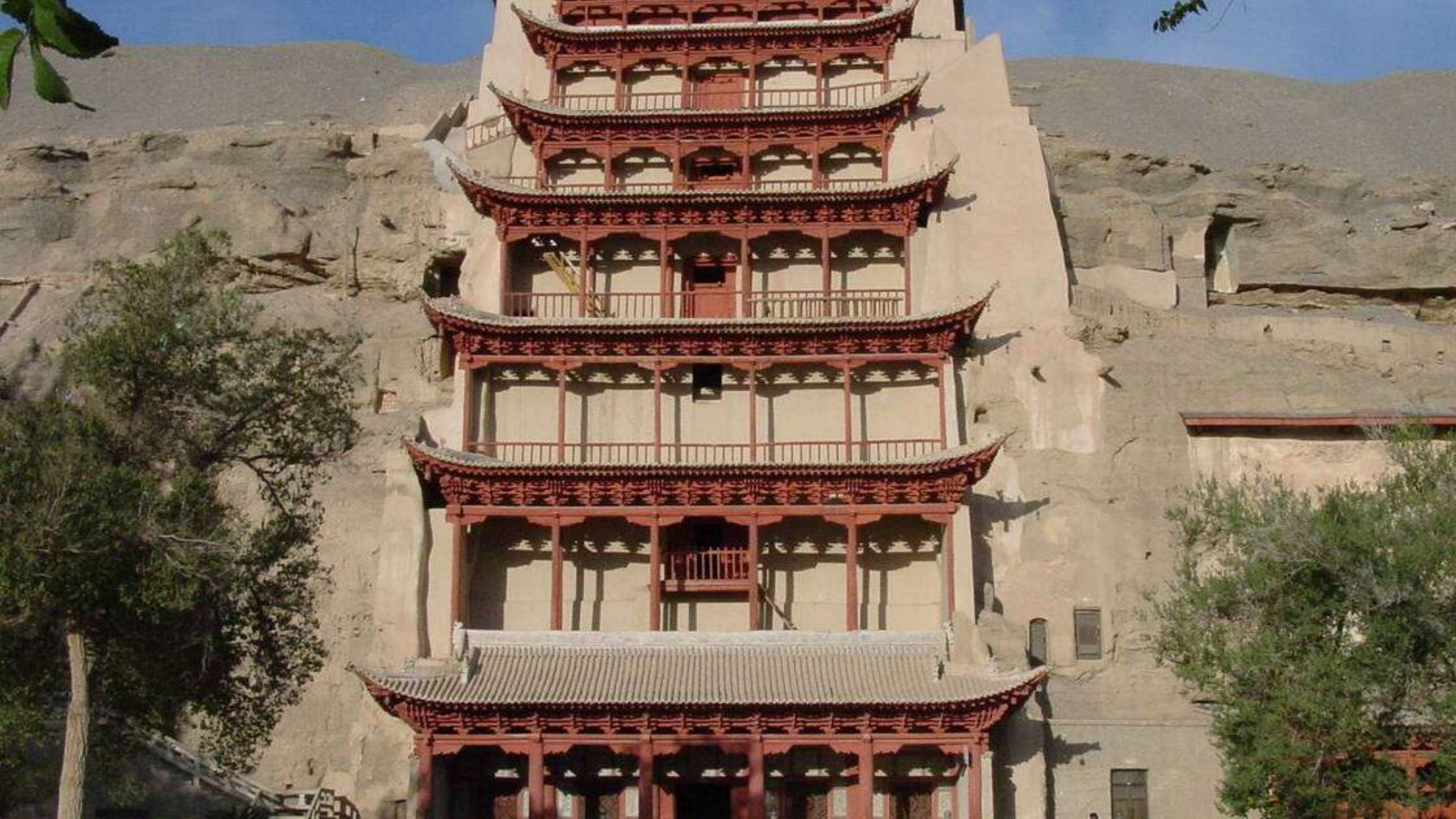


# Chinese Buddhist Cave Shrines

On the western edge of the Gobi Desert, near the ancient oasis town of Dunhuang, China, hundreds of cave temples were carved into a cliff face and decorated with Buddhist wall paintings and sculptures. The caves are known as the Mogao (peerless) Grottoes. From the 4th to the 14th century, Dunhuang bore witness to intense religious, commercial, and cultural exchange along the trade routes linking the East and West, known collectively as the Silk Road. The documents and artifacts discovered in the site's famed Library Cave, along with the paintings and sculptures found in almost 500 other caves, focus primarily on Buddhism. They also tell tales of the merchants, monks, and ruling families who lived, worked, and worshipped in the Dunhuang region.

- <https://www.youtube.com/watch?v=UH3X1H6pYjY>



















# Hasht Behesht

Hasht Behesht, literally meaning "the Eight Heavens" in Persian, is a 17th-century pavilion in Isfahan, Iran. It was built by order of Suleiman I, the eighth shah of Iran's Safavid Empire, and functioned mainly as a private pavilion. It is located in Isfahan's famous Charbagh Street.











# The Royal Mosque, Isfahan

In the opening of the prayer hall, different sizes of [arches](#) are used to create various intensities of light intensity. Since the arches of the opening decrease in size, less light can penetrate through.

As a result, it forms three layers of light ranging from bright to dim, which decreased gradually from the bright exterior to the dim [interior](#) space. When people walk through the large opening, the light around them will get darker and darker, giving an expression of mystery and solemnity of the hall. As the intensity of light decreases, our sense of calmness will rise, as dimness creates a quiet and peaceful atmosphere. It is believed that the design of the door can, therefore, get prayers mentally prepared to face god.

- <https://narcisbnb.com/sheikh-lotfollah-mosque/>















# Oculus New York

Designed by famed Spanish architect Santiago Calatrava, the Oculus is an aesthetically stunning transit hub that is home to the World Trade Center PATH station with trains to New Jersey, connections to 12 NYC Transit subway lines, and dozens of dining and shopping retailers as part of Westfield's Shops at the Oculus. Its bi-level underground concourses span the 16-acre World Trade Center campus and also provide access to office towers, the One World Observatory entrance, Brookfield Place and the Ferry Terminal in Battery Park City. Its main floor bustles with commuters, shoppers, and visitors, plus weekly programs, from markets and art exhibits to musical performances and retail events.

<https://www.youtube.com/watch?v=wdgWyT-qrXQ>

- <https://www.youtube.com/watch?v=AVpw2-DKtY>















- <https://architizer.com/blog/inspiration/collections/oculus/>



# Grant Johnson--Moab

Check out the cave house of a man named Grant Johnson, which is located just outside of Boulder, Utah. He lives in a mountain inside the Grand Staircase-Escalante Monument (it's now an inholding within park boundaries) — but this place isn't exactly what you'd expect. It's a 5,700-square-foot dwelling, complete with modern amenities such as hydroelectricity, climate controls, a gas barbecue grill and cell phone service (well, as long as [you have Verizon](#), in some areas of the home).

Johnson moved to Utah at the age of 17, when he started working for mining companies while finishing school. That's when he [learned the skills](#) he would need to build his residence. He purchased his 40 acres of land in 1980, but didn't originally conceive of his blasted-into-the-rock cave home until later.

- <https://www.youtube.com/watch?v=BqPtClvahWw&t=1s> (10 mins)







# Assignment Suggestions...

- Create an artwork that incorporates an oculus
- Use focused natural light from above to illuminate an object or space and photograph it.
- Use an oculus to create focus in an artwork. A peephole of sorts.