The Parthenon restoration work was divided into twelve programs. Initially the interventions were only of a rescue character, but gradually evolved into interventions for the enhancement of the monuments and the archaeological site.


View of the northwest side of the temple before and during the works.


(P.K.)

(P.K.)

(V.E.)

Digital imaging of the north colonnade, with different colours indicating the misplaced drums before the restoration, and after repositioning in their original places.

In the north colonnade, eight columns and their entablature, which had been misplaced, a total of 230 architectural members weighing 900 tons, were dismantled in order to be repaired and to be returned to their initial positions in the monument. All of the cement drums from the 1923-33 restoration were replaced with new ones of Pentelic marble. Most of the metopes were transferred to the Museum, while copies in artificial stone were set on the monument.


The east façade of the Parthenon during and after completion of restoration.

On the east side 160 architectural members were dismantled. They underwent repairs and conservation work and were returned to their positions. All of the metopes were removed and transferred to the Museum, while on the monument they were replaced with copies of artificial stone.

ISBN: 978-960-386-055-6


(V.E.)

(L.L.)

(L.L.)

The pronaos of the Parthenon during the restoration.

In the pronaos colonnade which retained only one column, two columns were restored in full and three partially. Drums and fragments that were lying on the ground and supplements of new marble were used in the restoration.



The fifth column from the east on the south side before, during and after the restoration.

The lower drum of the fifth column from the east, on the south side, was supplemented with new marble after the temporary removal of the entire upper portion without disturbing the order of the drums which comprised it.

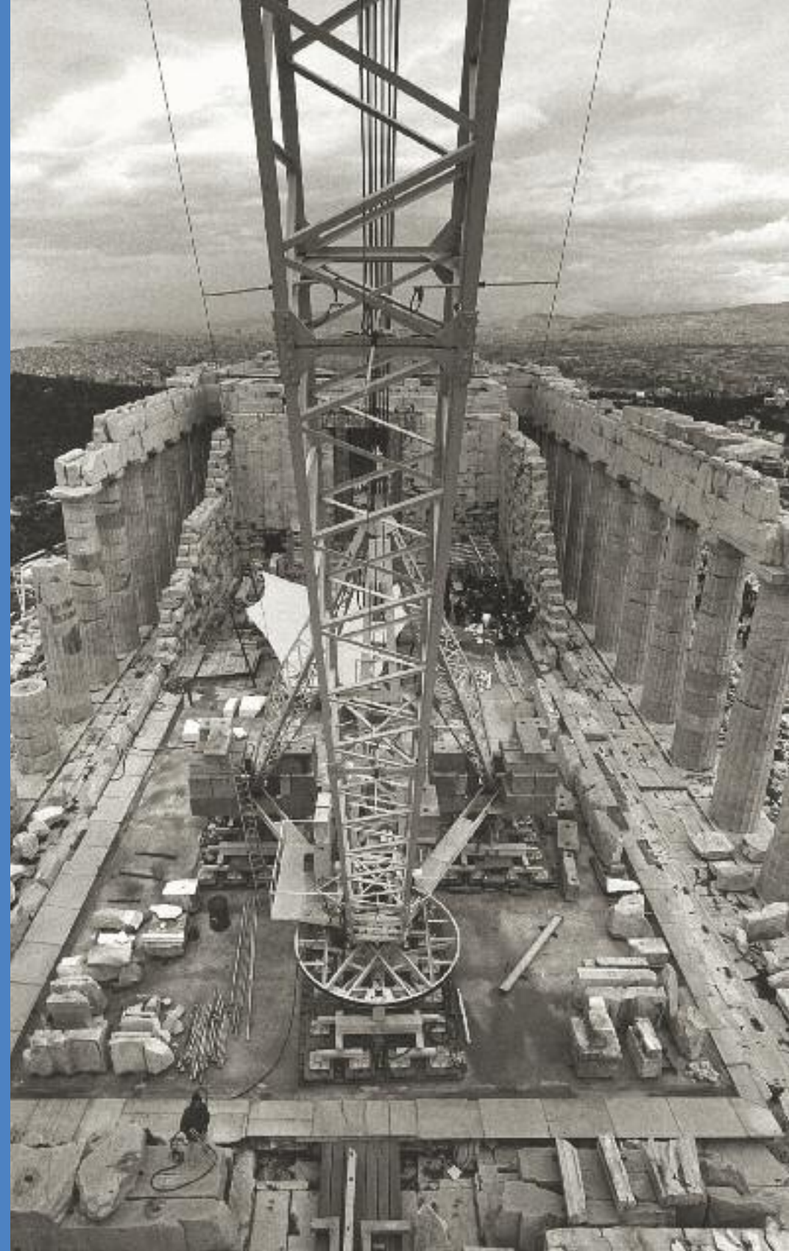

The west façade of the Parthenon during the intervention and after completion of the restoration.

Approximately 130 architectural members from the opisthonaos were dismantled, repaired and returned to their positions. All the frieze blocks were removed and transferred to the Museum, while copies in artificial stone were put in their place on the monument.

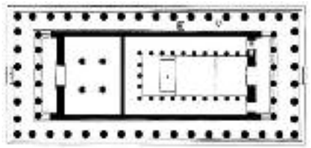
The original sculptures as well as copies of those that are today in the British Museum are exhibited in the Acropolis Museum in positions analogous to their original locations on the temple.

View of the Parthenon Gallery in the Acropolis Museum. (A.M.)

THE PARTHENON 6



The work-site within the cella of the Parthenon, dominated by the rotating crane.



The masterpiece of ancient Greek architecture was dedicated to the patron of Athens, goddess Athena, whose gigantic gold and ivory statue it housed. It is a monument of the Doric order with a perimeter colonnade. It has 8 columns at its narrow sides and a second inner row of 6 columns, as well as 17 columns at its long sides. Other two-storey interior colonnades supported the roof of the cella, the back part of which formed a large rectangular independent room. The monument is considered to have achieved perfection of the Doric order, by virtue of its harmonious proportions, the hidden refinements of its architectural forms and its technical perfection. These factors, along with its great sculptural wealth, made the Parthenon famous even during antiquity.

The architects of the great temple were Iktinos and Kallikrates. It was built under the general supervision of the famous sculptor Phidias, a personal friend of the leader of the Athenians, Pericles. The temple was built during the period 447-438 B.C., during the apogee of Athenian democracy, and expressed not only the city's respect for the divine but also the Athenians' cultural superiority over other Greek cities.

Continuing the tradition of the Doric order, the Parthenon had statues on the pediments and high reliefs on the metopes. However, it also adopted an Ionic feature, the continuous frieze that ran around the cella in the uppermost zone, with a total length of 160 metres. It thus had an unprecedented wealth of sculptural decoration, including its 13-metre-high statue of the goddess in the cella, as well as the acroteria. The subjects depicted on the two pediments are the Birth of Athena on the eastern one and the Contest between Athena and Poseidon for the protection of the city on the west pediment. The metopes depict the Gigantomachy, the Fall of Troy, the Amazonomachy, and the Centauromachy, and lastly, the continuous frieze shows the Panathenaic procession. Altogether they comprise a uniquely varied ensemble of classical beauty.

The Parthenon was badly damaged by fire during the late Roman period and was later poorly repaired. In the 6th century it was converted into a Christian church with the addition of an apse of the Holy Bema at the east end, and the relocation of the entrance to the west.

During the medieval period, the Parthenon became a place of pilgrimage in honour of *Panaghia Atheniotissa* (Holy Virgin of Athens). In the 12th century it underwent repairs and a staircase was added in the opisthonaos (rear porch). During the Frankish domination it was converted into a Roman Catholic church and after the Ottoman conquest it became an Islamic mosque with the addition of a minaret and some slight modifications.

The great disaster occurred in 1687 during the period of the Venetian-Turkish war with the explosion of the gunpowder which the Turks had stored inside the temple. Sections of the cella walls and many columns of the side colonnades collapsed. In the early 19th century, Lord Elgin removed from the monument most of the sculptural decoration, which is exhibited today at the British Museum in London.

The first studies of the Parthenon's architecture had already created considerable interest in Europe, mainly in England and Germany, and many buildings influenced by the monuments of the Acropolis were constructed. Immediately after the War of Independence, this interest intensified, the Parthenon acquired the status of national symbol, and there was a general intent for its restoration.

The work began with the removal of the later additions, general arrangements of the site, excavations, and rudimentary reversible consolidation of the north wall of the cella by K. Pittakis (1842 onwards). Other conservation work of minor importance followed, and in 1894, after an earthquake, the implementation of a new programme of consolidation and, chiefly, restoration, by N. Balanos commenced, and was continued until 1933. Balanos's work on the Parthenon was praised because it gave the building back its closed form, removed dilapidated elements, and successfully maintained the ruinous character of the temple. It had, however, three significant disadvantages as it was executed with a) widespread use of iron connecting elements and cement, b) the misplacement of similar architectural members and c) the chiselling of many ancient members, in order to facilitate the work.

The Parthenon restoration work by ESMA from 1975, and after 1999, by YSMA, was divided into twelve programs and began in 1983 with the establishment of the work-site. It was preceded by the removal of the west pediment sculptures in 1977. The restoration programme for the **east side**, which was completed in 1991, is part of the rescue interventions. All the members of the two corner entablatures and all the metopes were removed and transferred to the Museum. On the monument they were replaced by exact copies in artificial stone. The precise geometrical form of the Parthenon's façade, which had been disturbed by the explosion in 1687 and an earthquake in 1981, was restored.

In 1993, the fifth column from the east on the **south side**, which was in danger of collapse, was restored after the overlying entablature was dismantled, and the entire column from the second drum upwards was removed so that the lowest drum could be filled and restored to a stable state.

The intervention on the **western section** of the building (opisthonaos, 1997-2004), was also of a rescue character. In 1993 over 20 metres of the blocks from the west frieze, the only sculptural ensemble which had remained in its place, were dismantled and transferred to the Museum, since this was proved to be the only solution to the problem of damage by the atmospheric pollution of Athens. This was preceded by the reinforcement of cracked column drums with injections of stabilising compound.

In 2000, the 21 architraves of the interior porch of the opisthonaos, which were found to be cracked from the ancient fire and the explosion, were dismantled. The fragments were joined together, structural restoration was carried out and they were put back in place, while the frieze was replaced by exact copies in artificial stone.

The rescue interventions also include work on the **north colonnade**. Eight columns along with their entablature, a total of 230 architectural members weighing 900 tons, were dismantled in order to remove the rusted iron elements and to return them to their initial positions by correcting the misplacements of the first restoration. The program also included the replacement of cement drums from the 1923-33 restoration, with new ones of Pentelic marble. Most of the metopes were transferred to the Museum and were replaced with copies in artificial stone. The work was completed in 2010.

The sections of the **side walls** of the cella, that had been restored prior to 1930, were dismantled so that the rusted iron connectors could be removed from the blocks, and the walls were completed with blocks that were identified from scattered architectural members lying around on the Acropolis. The study for the new restoration of the walls, including the resetting of the 350 members identified, is in its last stage, as is that of the intervention on the lintel of the entrance to the opisthonaos, that is, the removal of the reinforced concrete lintel remaining from the Balanos restoration and its replacement with marble.

A rescue intervention is underway on the **west façade** of the temple. This involves the dismantling of the two ends of the pediment and entablature where Balanos had intervened, the removal of rusted metal elements, structural restoration of many cracked members, and the transfer of six metopes to the Museum as well as their replacement with copies in artificial stone.

The extensive restoration of the east interior porch of the temple (the pronaos, 1995-2004), which had only one column in its place, comes under the enhancement works on the Parthenon. Two more columns were entirely restored and another three in part, using both the whole and fragmented colonnade material, that was collected from members lying on the ground. The carving of the flutes on the column supplements still remains to be done.

In the domain of conservation all the architectural members which were moved, were checked and underwent minor interventions: joining of chips and small fragments, sealing of cracks, removal of organic and other deposits, and removal of recrystallised layers.

A work of major importance is the conservation and cleaning of the west frieze, which was achieved using modern laser technology. This was preceded by thorough research on the response of this method to the specific problems of the Pentelic marble sculptures.

Apart from the applied research that was conducted by the staff of the technical office in the context of their restoration studies, new knowledge emerged regarding the great temple's form and construction methods and the earlier interventions it underwent both in antiquity and the medieval period.