

**THE *ANASTYLOSIS* OF THE ACROPOLIS MONUMENTS**

**1975-2000**

by

Dr. Fani Mallouchou-Tufano  
Archaeologist, Ephorate of Prehistoric  
and Classical Antiquities of the Acropolis

## **THE *ANASTYLOSIS* OF THE ACROPOLIS MONUMENTS 1975-2000**

The task of systematic conservation and restoration of the Acropolis monuments, as is well-known, has been in process again from 1975 on. The work is directed and supervised by the Acropolis Conservation Committee, an interdisciplinary committee of specialists of unquestionable authority, comprising archaeologists, architects, civil and chemical engineers, in co-operation with the 1st Ephorate of Prehistoric and Classical Antiquities of the Ministry of Culture. The work is funded by the Greek State and the European Community.

When the work was started, it was purely in the nature of a rescue operation, the purpose being to cope with the main problems of the monuments: cracks and breakage in the marble due to the oxidation of the iron elements that had been introduced during earlier interventions, alteration of the surface by atmospheric pollution, precarious structural load capacity of the monuments because of their ruined condition and wear from the footsteps of millions of visitors on the Acropolis Rock, itself a monument -bearer of valuable traces of a long history. Gradually, during its course, the nature of the work was expanded and directed to a broader restoration of the monuments. The task was now to correct mistakes (especially the faulty positioning of architectural parts) of earlier restorations and to reset in the monuments dispersed ancient material that was identified during research carried out before and during the course of the work. This development in the nature of the work meant that the authenticity of the monuments in terms of form and structure could, to some extent, be recovered. Their inherent values for scholarship, architecture and, more generally, their aesthetic and environmental values were emphasised and the ruins could be better understood by the general public visiting them.

The method of work is dictated by the articulated system of construction of tile monuments, which are built of independent architectural elements, set without plaster as “dry masonry”. The parts of monuments that had undergone restoration earlier, and sometimes sections that had not been restored in the past but nonetheless showed similar signs of deterioration and breakage, are removed and their architectural elements receive conservation on the ground: the rusted metal elements are removed and replaced by others of titanium, the broken pieces are rejoined with titanium clamps and dowels and a special cement compound. If necessary, especially for reasons of structural stability, some parts are filled in with new Pentelic marble, in such a way as to be reversible, using the same method as that applied to the copies of the sculpture. The surface of the monuments likewise undergoes conservation: the various kinds of damage, cracking, flaking, are treated with spraying and impregnation, filling and injections with inorganic materials that are reversible and have proven satisfactory over a period of time. Finally, in order to avoid irreparable damage, the architectural sculptures are moved to the Acropolis Museum; they are replaced on the monuments by accurate copies in cement, finished especially for tone and texture.

*Anastylosis* itself began in 1979 with work on the Erechtheion, which was completed in 1987. The north wall of the Erechtheion was restored to a greater height with the resetting of identified ancient blocks. The structural load capacity of the entire building was increased until the restoration of the NE corner with copies of the column and the overlying blocks of the entablature which are in the British Museum. Casts also replaced the Caryatids on the monument, the originals being moved to the Acropolis Museum. The second work of conservation which was completed during the period 1979-1992, is the consolidation of the cliffs of the Acropolis hill slopes, using anchors of steel alloy in the rock mass.

The restoration of the Parthenon comprises twelve programs of operation applied to twelve different parts of the monument. The first program, carried out from 1986 to 1990, was the *anastylosis* of the east façade of the monument. During the work the exact geometrical form of the Parthenon façade was restored. It had been shaken in the past by the explosion of 1687 and by a number of severe earthquakes. In 1992/3 the west frieze was transferred to the Acropolis Museum. The plan is to replace it on the monument with a faithful copy. Work continues in the *opisthonaos* with structural restoration of the columns and parts of the overlying entablature. The new *anastylosis* of the long walls of the cella will include recently identified ancient architectural elements that had been dispersed. Work continues likewise on the *pronaos*, where the three southernmost columns and the overlying *epistyle* will be restored on the basis of recently identified authentic ancient material. Work on the north colonnade of the monument, which was restored during the 1930's, is considered absolutely necessary in the near future. Severe problems of corrosion are evident in the embedded iron armature. The faulty placement of restored architectural elements is also evident; the study for a new *anastylosis* has already been completed.

The restoration of the Propylaea is likewise divided into various programs corresponding to the different parts of the monument. From 1990 on progress has been made on restoring the sections that had undergone *anastylosis* at the beginning of the 20th century: parts of the coffered ceiling of the central building of the monument, and of the south wall of its east porch. During the course of the work the original positions of nearly all the ceiling coffers were found. Most of these blocks had not been used in the earlier *anastylosis* and they lay scattered on the Rock. It will thus be possible to restore them to the monument in the future. Planned for the future is work on the other parts of the east porch that underwent *anastylosis* in the past, the doorway wall and the side wings of the Propylaea.

In 1998 the frieze of the temple of Athena Nike was transferred to the Acropolis museum. The monument, which has already undergone *anastylosis* twice in the past, is likewise in critical condition and a new restoration is planned. Operations on the Acropolis are completed with programs for display and protection of the plateau of the Rock itself, for cataloguing and reorganising the architectural elements and sculpture fragments scattered there and for the construction of pathways for the circulation of the visitors with appropriate material.

Finally, it should be noted that the work of *anastylosis* being carried out today on the Acropolis has been the fuse that has rekindled scholarly research on the monuments of the Sacred Rock. The careful documentation that accompanies the work has revealed much new information on the subject of the architecture, the sculptured decoration, the successive historical phases of the monuments and their environment and the various dedications on the Acropolis Rock. Further information has emerged also about the earlier operations of conservation and *anastylosis* of the monuments.

The *anastylosis* of the monuments of the Acropolis from the beginning, in the historical course of the modern Greek state, assumed particular importance because of

the special “national” character and universal cultural meaning of this unique complex of monuments. The goal has always been to preserve them with the best possible means and materials, as well as with the use of the best manpower available to carry out the work. Current *anastylosis* campaigns on the Acropolis are distinguished for their quality: the inter-disciplinary approach used in all phases of the work, the compiling and publication of completed studies on the restoration of the monuments prior to any intervention, their submission to the scrutiny of the international scholarly community through international meetings of specialists, the elaboration and enrichment of the established international theoretical framework for such work with supplementary principles drawn from the special constructional characteristics of the Greek classical monuments, the careful documentation of the work in all its phases, the application of the most advanced technology (in some cases even setting a standard) to the investigation of the monuments, the organisation of the work-sites, the carrying out of the work itself and the management of documentation. These are concepts that have influenced other contemporary interventions on monuments within Greece, thus creating a “school”. These methods have been recognised and in some cases they have also been applied internationally. These facts, together with the technical knowledge acquired over so many years, have given Greece an international ranking in the field of restoration of monuments.

Despite this objectively rich and multi-dimensional work carried out by the Acropolis Conservation Committee during the twenty-five years of its operation, recently the work of *anastylosis* on the Acropolis has lost its initial rhythm, vigour and force. In order to confront this situation, last May the Greek government established a special Service in the Ministry of Culture, the Committee for the Preservation of the Acropolis Monuments. This was launched at the beginning of 2000. It is hoped that this new committee, under the academic supervision of the Acropolis Committee, with the economic and practical facilities provided to it and the necessary, planned renewal of its scientific and technical staff will be able to complete the various operations on the Acropolis in good time, so that the monuments can be handed down to the new generations with the “unfaltering breath of an ageless spirit” and with the “bloom of perpetual newness”, to use the words of Plutarch, but bearing the seal of our own age as well.

Select Bibliography:

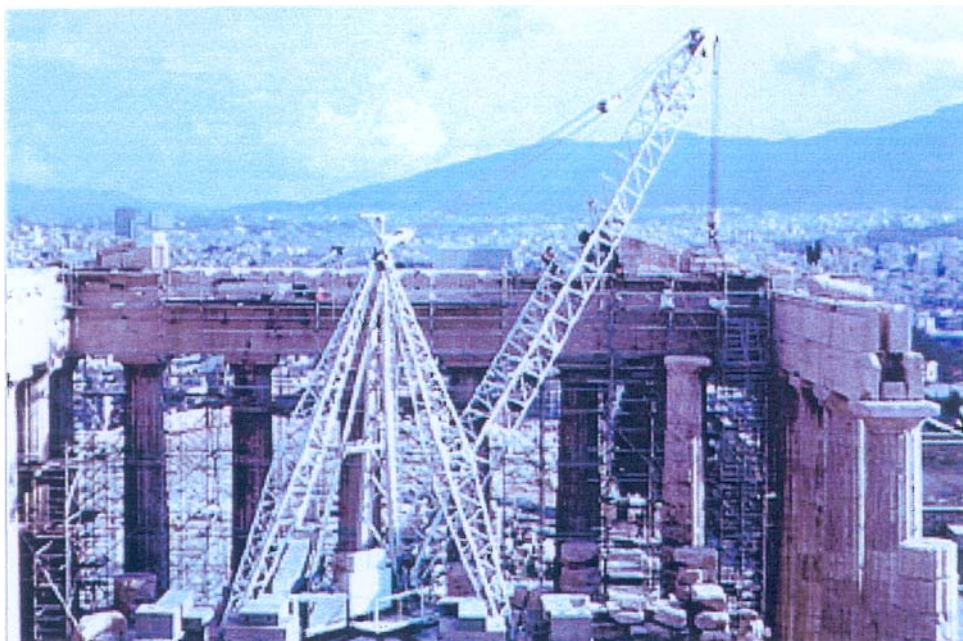
*The Acropolis at Athens. Conservation, Restoration and Research 1975-1983*, Athens 1985.

*Acropolis Restoration*, the CCMA Interventions, London 1994.

Dr. Fani Mallouchou-Tufano  
Archaeologist. Ephorate of Prehistoric and  
Classical Antiquities of the Acropolis.



The East side of the Parthenon after its restoration



The inner part of the Parthenon while the restoration is under way

**DOCUMENTATION OF THE COLUMN CAPITAL AND DRUM  
FROM THE PARTHENON IN THE BRITISH MUSEUM**

(excerpt)

by

C. Zambas

Director of the Service for the  
Preservation of the Acropolis Monuments

## DOCUMENTATION OF THE COLUMN CAPITAL AND DRUM FROM THE PARTHENON IN THE BRITISH MUSEUM

(excerpt)

### 4. Proposal for the future of the marble pieces [from the Parthenon].

The British Museum has already decided to proceed with a new display of the column drum and capital, in which they will be incorporated in a reconstruction of the NW corner of the Parthenon, using copies of the overlying parts of the entablature. Just such an assemblage was made in the museum during the 1920's.<sup>1</sup> The personal opinion of the writer, which has been conveyed to Mr. I. Jenkins, is that this sort of use of the two marble pieces goes counter to the understanding, now common to the scholarly community, that the marble elements of the Parthenon possess a unique «personality» or individuality that is inimitable. The precision of the building and its magnificent refinements, unrivalled to the present time, allow only one specific place for each marble piece, excluding even corresponding positions (for example, the 11th drum of a column cannot be set in the 11th position of another column).

The problem is clearly greater when it is a question of using the column drum and capital from a middle column in a corner column. The problem lies not only in the fact that the diameters of the drums and the measurement of the abacus of the corner column are greater by 4,5 cm., but also in the violation of the clear evidence provided by these architectural elements for the construction of the building. It is not permissible to hide dowel and pry-hole cuttings, which indicate a capital belonging to a middle column, in a corner assemblage presupposing an entirely different system of cuttings. Nor is it permissible to bury the system of circumference *taeniae* which correspond to a middle *epistyle* block, in a reconstruction of the corner of the entablature which implies *taeniae* of a completely different type and arrangement. Finally it is likewise impermissible to use the final drum of a middle column in a reconstruction of a corner column when it is common knowledge that on the corner

---

<sup>1</sup> I. Jenkins. *Archaeologists and Architects*, Trustees of the British Museum, London 1992, p. 224 and photo. 86.

columns the unequal heights of the drums are arranged differently in order to form an inclined axis with a different orientation and a different angle in relation to the vertical. Since a tremendous research effort is being made to recognise the positions of the sculptured fragments and their arrangement in space and since the new outcome of research enables them also to be reset,<sup>2</sup> it is not permissible for the architectural elements of the Parthenon to be placed at random.

It would of course be possible to by-pass all the problems outlined above with another type of exhibition (for example, a separate proper display of the two marble pieces next to a full copy of the corner of the entablature with explanatory signs and visual aids). The undersigned, however, has already made a completely different proposal, that is the *anastylosis* of the drum and capital in the north side of the Parthenon as part of the work programmed by the Committee for the Preservation of the Acropolis Monuments.<sup>3</sup> The question of course is connected with the official claim of the Greek Government for the return of the architectural and sculptural marbles of the Parthenon. Indeed this claim is a core political subject which can neither be examined in this essay nor in the framework of the Committee for the Preservation of the Acropolis Monuments, which has another jurisdiction and responsibility. The question, however, can be examined from the standpoint of scholarly requirement,<sup>4</sup> notably in this sense: the two marble pieces of the Parthenon should either be restored on the Parthenon or they should be museum displays, either the British Museum or the New Acropolis Museum.

An extensive intervention is planned for the north side of the Parthenon. Repair of the marble pieces will be combined with the correction of the earlier *anastylosis*. The architectural parts will be returned where they were in antiquity, showing respect to the intrinsic nature of the building and the marks left by all its historical phases. The longevity of the *anastylosis* carried out by the Committee for the Preservation of the Acropolis Monuments is guaranteed by the method of study and execution of the work. Thus this coincidence in time provides an unparalleled opportunity for the

---

<sup>2</sup> As, for example, the frieze as indicated on the basis of recent research findings, see I. Jenkins, «The South Frieze of the Parthenon: Problems in Arrangement,» *American Journal of Archaeology* 99 (1995) 445-456.

<sup>3</sup> C. Zambas, *Study for the Structural Restoration of the North Side of the Parthenon*, p. 34.

<sup>4</sup> For an approach to the general problem from the standpoint of scholarly requirement, see A. Delivoria. *The Sculptured Decoration of the Parthenon. The Parthenon and its Influence in Modern Times* p. 116.



return and restoration of the two architectural elements necessary for the building's integrity.

To keep the two marble pieces in the museum, replacing them on the monument with copies, would serve a purpose if their state of preservation was very good, that is, if the edges of the abacus, the channels and arrises of the flutes and the original surface of the marble with its tone were all preserved. The situation is, however, that many of the drums *in situ* and many of the column capitals of the Parthenon, even though continuously exposed to a heavily polluted environment, are actually in a better state of preservation than the two architectural elements in the British Museum. Thus the gain from keeping the two marble pieces in the museum is negligible when compared to the damage done to the building's integrity.

It is proposed that the Committee for the Preservation of the Acropolis Monuments make an official request, on the basis that scholarship demands it, for the return of the drum and column capital from the British Museum. The two pieces will then be reset in the north side of the Parthenon, the drum in the 6th column and the capital in the 10th.

C. Zambas

Director of the Service for the Preservation of the Acropolis Monuments



The combination of the Parthenon column capital and drum  
housed in the British Museum.

(photograph taken 10-14 / 11 / 1997)