Conservation of Classical Monuments: A Study of Anastylosis with Case Studies from Greece and Turkey

Volume 1

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by

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Institute of Archaeology
University College London
To my parents Kleovoulos and Ourania
and my sister Andromahi

Στονς γονέας μου Κλεόβουλο και Ουρανία
και στην αδερφή μου Άνθρομαχή
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Abstract

ABSTRACT

Anastylosis involves the re-assembly of existing, but dispersed, members of a monument and is implemented within a framework for the preservation and presentation of ancient monuments. It was introduced as a concept and practice in the 19th century. Anastylosis is encountered throughout the world, but most often in the Mediterranean region. This research explores the concept of anastylosis in the region, and specifically examines how it as applied to classical monuments in Greece and Turkey.

The thesis examines the terminology, philosophy, theoretical principles and technical issues of anastylosis, within the wider context of cultural heritage management. Case studies from Greece and Turkey, and a survey of anastylosis practitioners, are used to identify and investigate relevant issues. In addition, a small visitor survey examines the understanding of anastylosis by the public, the impact for interpretation of monuments, and highlights the role of stakeholders in conservation activities. Problematic areas in decision-making, planning, implementation, and post-implementation are identified, raising concerns over its definition, objectives, theory, driving forces, and technical matters. These are analysed with reference to current and future practise.

Building on this analysis, the thesis concludes by establishing guidance for the use of anastylosis; this is specifically aimed at Greece and Turkey, but has wider applications, both within the region and at an international scale. The approach recognises the importance of anastylosis as a tool within the wider field of heritage conservation and management and offers a framework for planning, decision-making, implementation, and post-implementation. Specific theoretical principles and technical matters are proposed.

In advocating a clearer definition of what anastylosis encompasses, and how it can be implemented within the overall framework of theoretical and technical aspects for the care and preservation of the material remains of our past, the research concludes by asserting the importance of anastylosis as an architectural conservation method, with significant interpretative potential, in the management and presentation of archaeological sites.
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ABBREVIATIONS

AA  Archaeological Association

CAC  Central Archaeological Council

CCAM  Committee for the Conservation of the Acropolis Monuments

CCAMAL  Committee for the Consolidation and Anastylosis of the Monuments of the Acropolis of Lindos

CCEM  Committee for the Conservation of the Epidauros Monuments

GA  9th General Assembly and Symposium of ICOMOS

HE  Hellenic Association

HMC  Hellenic Ministry of Culture

ICCROM  International Centre for the Study of Preservation and Restoration of Cultural Property

ICOMOS  International Council On Monuments and Sites

IGME  Institute of Geological and Mineral Exploration

SRAM  Service for the Restoration of the Acropolis Monuments

UNESCO  United Nations Educational, Scientific and Cultural Organisation
CHAPTER 1: INTRODUCTION

1.1 Background
Anastylosis is a type of intervention implemented in the framework of preservation and presentation of ancient monuments. It was introduced as a concept and practice at the beginning of the 19th century, when theories of protection and conservation of archaeological heritage were systematised. In the international conservation charters, it is endorsed as a justifiable form of architectural conservation. Its application in monuments during the 21st century is influenced by current concepts of heritage management and conservation.

Thus, anastylosis is an intervention with a historical progress and significance in the care and maintenance of archaeological monuments. In this sense, it is closely related to conservation and interpretation of monuments and the debates accompanying these issues, such as minimum intervention, authenticity, education, cultural and national identities, and assessment of values. The manner and extent of the practice often associate it with reconstruction, which is implemented mainly for reasons of improving the legibility and enhancing the interpretation of a monument.

Examples of anastylosis are encountered throughout the world, but more often than anywhere else in the Mediterranean region. Therefore, it becomes an important method of architectural conservation and presentation in the area. Although it complies with theories and rules of current practices, there are still grey areas in its definition, understanding, and planning. The reasons and driving forces behind its implementation show its importance in conservation decisions. Philosophical questioning is not alien to the concept too. The technical aspects of its implementation highlight its dependence on scientific and technological developments in the field. Practical applications are often inconsistent, while technical problematic matters regularly rise. Questions about effective anastylosis applications have recently emerged and led to suggestions of introducing a specific methodology for its implementation.
In this regard, anastylosis becomes an important type of intervention to ancient monuments throughout the world, especially in the Mediterranean region. The ongoing debate on its best practice indicates its significance as a conservation method and a stage of decision-making process in the management of archaeological sites and monuments. Hence, the need for an all-inclusive understanding of the method, a clearer theory, and guidelines for its practical implementation in order to effectively resolve problems emerges.

1.2 Research questions and aims
The principal aim of this study is to explore the concept and practice of anastylosis as applied to monuments in the Mediterranean region, by focusing on case studies from Greece and Turkey.

Specifically, I provide a brief historical overview of how anastylosis emerged as an intervention approach to ancient monuments and study how it developed as such. Moreover, this study explores issues related to its definition (terminological and etymological questions); the reasons and aims of its application, including the driving forces influencing relevant decisions; the established theoretical framework, such as the principles guiding the intervention (minimum intervention theories, respect for values and authenticity) and further delineated principles (reversibility, respect for the structure and architecture of the monument); and philosophical speculations, mainly concerning aesthetics and the creation of modern ruins. The relation of anastylosis with other intervention approaches, such as minimal intervention or managed decay, restoration and reconstruction, conservation and stabilisation, are explored, including the reasons for resorting to the specific method. Further problematic areas and technical aspects related to its planning and implementation are analysed and discussed. Thus, the strengths and weaknesses of anastylosis are highlighted. The ways in which these are dealt with, either effectively or not, are revealed and a suggested methodology for resolving them is established. In the meantime, the future of anastylosis, from all its diverse aspects, is explored regarding its successful planning and implementation.
1.2.1 Specific objectives

The thesis explores anastylosis as applied to ruined and previously restored monuments of classical antiquity in Greece and Turkey. The specific objectives relate to the following issues:

➢ What is the historical background of anastylosis?

Anastylosis has a long history from its first appearance in the 1st century AD. In its re-appearance, in the beginning of the 19th century, it has been implemented within diverse contexts. Technical matters and theoretical principles were and are still raised. Past procedures are worth exploring in order to identify differences and similarities between past and current anastylosis applications.

The above aim is examined in Chapter 3 and is analytically discussed through some of the case studies (Chapter 4). Specifically, the choice of the Parthenon and the Erechtheion in the Athenian Acropolis and the Hellenistic Stoa in Lindos reflects the objective of examining issues related to past anastylosis applications. The comments of professionals in the survey (Chapter 6) highlight and contextualise the historical development of anastylosis.

➢ What does the concept and practice of anastylosis currently entail?

Anastylosis is included among the methods of architectural conservation internationally. It is widely practiced on ruined or previously restored archaeological monuments of the Mediterranean region. It has become an intervention strategy, decided and implemented as part of heritage management and within the framework of the international restoration theory. It is strongly connected to matters of presentation and interpretation of monuments. A broad range of technical and practical aspects dictate the manner of its planning and implementation.

Yet, when confronted with a ruin various types of intervention may be chosen and applied. Therefore, it is essential to establish the reasons for which anastylosis is chosen among the wide range of conservation and presentation methods. Defining anastylosis in relation to these kinds of intervention, clarifying their similarities and differences, and assessing its success compared to these other interventions contributes to its delineation as a conservation and presentation method.
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On the other hand, anastylosis is linked to particular types of structures and to specific geographical locations, primarily the Mediterranean. It is also defined with relation to its manner and extent, as well as in relation to its aims. Thus, establishment and confirmation of these parameters assist in defining it.

This aim is achieved by exploring the current ideas on anastylosis as encountered in the relevant literature (Chapter 3) and the opinions of professionals extracted by a survey (Chapter 6). However, the primary source of information becomes the case studies (Chapters 4, 5), with the investigation of reasons that led to the decision on anastylosis and the aims that it sought to achieve, as well as the investigation of technical matters.

> Why is it important to define principles and standards of the concept and practice of anastylosis?

Architectural conservation is guided by theories and principles that developed during the last two centuries and are still evolving. These theories are enhanced by the determined reasons, aims, and approaches to conservation and preservation activities. They are accompanied by scientific experimentation and technological advances. Theoretical and philosophical speculations on current approaches result in considerable advanced attitudes towards heritage.

Anastylosis, on the other hand, has a long history and, since the mid-20th century it is endorsed as a justified form of architectural conservation through international conservation charters. Though it has applications worldwide, it is frequently practised in the Mediterranean region. It is strongly linked with the preservation and presentation of monuments and is subjected to all relevant debates and theories. Thus, it is important to explore the significance of anastylosis as a term, concept and method, which, in turn, will reveal why anastylosis should have determined principles and standards.

Examination of issues and debates of heritage conservation and management (Chapter 2) highlights the inclusion of anastylosis within the wider framework of the field. Examination of case studies covering the extensive range of anastylosis issues
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(Chapters 4, 5) and exploration of the opinion of professionals and the public (Chapter 6) indicate the significance of anastylosis as a management and conservation strategy and the importance of establishing principles and policies for its implementation.

➢ What are the driving forces that dictate anastylosis implementation and why?
The driving forces play a considerable role in the development of conservation and preservation approaches towards archaeological monuments. Interpretation and education, experiment and research, tourism development, local and cultural identities explain the increasing number of extensive interventions. They are interrelated and can be equally misused. Anastylosis is guided and performed under the justification and motivation provided by these driving forces. Which are these forces? How influential are they in anastylosis implementation? How and to what degree do they determine the extent of intervention?

The above are explored in the overview of the current context of heritage management and conservation (Chapter 2) and the outline of the history and modern practice of anastylosis (Chapters 3, 4, 5), as well as through the opinions of heritage experts (Chapter 6).

➢ What are the issues related to decision-making, planning, implementation, and post-implementation of anastylosis?
During the process of deciding, planning, and implementing anastylosis multiple issues are worth identifying and clarifying. These are related to management and infrastructure matters; the collaboration of disciplines; the accuracy of published data after examining the undertaken works; the issue of consultation of and provision of information to interested individuals and the general public; and various matters that may rise in individual projects.

These aspects are drawn out from the overview of the context of heritage management (Chapter 2), the current issues of anastylosis (Chapter 3), and the examination of the case studies (Chapters 4, 5), and are further analysed in the discussion (Chapter 7).
What, if any, are the problems and complications associated with the application of the method, and how do they arise?

A wide range of issues arise from deciding, planning, and applying anastylosis:
- terminological (use of the term in the international conservation vocabulary, its etymology, its variation in different contexts and languages);
- philosophical (approaches to assessing the results and successes of the method, influenced by philosophical perspectives on aesthetics);
- theoretical (delineation of principles, relation with the theoretical concepts of restoration, inclusion in international conservation charters, enhancement of the values of monuments and their context; establishment of the method as a strategy of site management; importance of understanding public perceptions); and
- technical (type of monuments with relation to their architecture, structure, geographical location; use of original material with regard to its state of preservation and amount, incorporation of new material for completing missing parts, sufficiency or not of the original structural supporting system; use of ancient or new methods, techniques and tools, and co-operation of disciplines).

These issues are identified in the chapter on anastylosis theories and practices (Chapter 3) and are explored in detail throughout the case studies (Chapters 4, 5) and the professional survey (Chapter 6). Problematic matters are further deliberated in Chapter 7.

What should be an appropriate anastylosis methodology, given the type of monuments it is applied to, the technical issues and problems arising during its implementation, and the current restoration and management theories?

The issues related to anastylosis decisions, planning and implementation are identified and explored in-depth. Its application in the international sphere is acknowledged and its wider importance in the Mediterranean region is explored, with particular emphasis on Greece and Turkey. Its principles are identified and established. Problematic areas are highlighted and efforts to resolve problems are identified. All the above are explored through the historical overview of anastylosis (Chapter 3) and the investigation of case studies (Chapters 4, 5), as well as through the opinions of professionals and the public (Chapter 6). They are all drawn together in the general discussion (Chapter 7).
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The final aim becomes the delineation of a methodological approach to anastylosis that deals with subsequent problems and assists practitioners in employing it for preserving and presenting ancient monuments. This approach provides an inclusive definition of anastylosis and delineates the stages in deciding, planning, and implementing the method, while it identifies problematic matters and suggests ways of resolving them. This methodology is drawn out from the discussion of Chapter 7 and is presented in Chapter 8.

1.3 Selection of study area

Despite having international validity, anastylosis seems to be widely known and applied mainly in classical monuments of the Mediterranean region. This is the reason why this study focuses on the Mediterranean area and case studies have been chosen from the monuments dated in the classical antiquity and from the geographical region in which most examples are encountered.

Anastylosis is broadly relevant to the Mediterranean as far as cultural contexts and structural type and building materials are concerned. Yet, Greece and Turkey were deliberately selected. Many examples of anastylosis are encountered there, since an abundance of monuments with the specified structure and building material (the structural type to which anastylosis can be applied coincides with classical monuments, found throughout Greece and in the west coast of Turkey).

Pragmatic reasons contributed to the selection too. The cultural context is quite similar in both countries. Greece was primarily selected because access to monuments and collection of information was much easier for a Greek national. Turkey could easily be accessed from Greece and combined visits could be arranged.

Besides, the legislative framework is quite similar in both countries, where restoration directorates co-ordinate the works undertaken either by their employees and relevant bodies or even by foreign archaeological schools. Some monuments in Greece are subjected to systematised efforts of anastylosis and availability of information was ensured. Even though access to unpublished reports was limited,
bureaucratic, or non-existent as a concept, the existing literature and published reports of the undertaken works provided all essential information. The anastylosis projects in Turkey were undertaken by foreign archaeological schools, whose scholars agreed to supply information or commentaries about the projects, while their work was published in international journals and sources, to which access was straightforward.

The number of the monuments selected was limited to eight. This restricted quantity of examples was decided upon the depth in which each project could be explored. An extensive number of case studies would not allow for detailed presentation and analysis of the issues aimed to be scrutinised. A rather smaller sample of monuments subjected to anastylosis would permit meticulous examination of the wide range of emerging issues.

The selection of one case study from each Mediterranean country was rejected on the basis that different samples from each country may not have been representative examples. Selection of more than two examples from each country, and even from the same archaeological site within a country, would ensure that possible differences in approaches could be noted and discussed. Furthermore, all Mediterranean countries have diverse legislative frameworks, which would be difficult to assess and present, as well as to approach so as to collect the desired information and perform the research in practical terms. For instance, visits to the relevant sites to examine and photograph the monuments in question were easily and efficiently organised and realised, once relevant permissions were acquired.

Additionally, absence of case studies restored according to national conservation charters, such as the two Italian charters for restoration, was deliberate. These two charters are referred to in this research as examples of adaptation of international restoration principles to the context of the heritage of a particular country. Thus, examination of Italian case studies was eliminated from the research. This choice was enhanced by the unavailability of publications and literature about anastylosis of monuments in Italy, in combination with the extent and volume of information that was already collected for monuments from Greece and Turkey.
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1.4 Research methods

The applied research methodology was formulated with a view of exploring many perspectives, which included:

1.4.1 Literature review

The debate on anastylosis is situated within the wider cultural resource management theory and practice. The literature review includes the current issues in site management and conservation within which the process of anastylosis is undertaken (Chapters 2, 3).

Specifically, a brief outline of the history of architectural conservation and restoration aims at indicating the development of restoration theory and philosophy. Then, the overview of theories and practices of heritage conservation and management provides an insight of current debates and tendencies that influence anastylosis principles and practices. The overview of the concept and practice of anastylosis identifies the current issues. A historical synopsis provides information on the emergence of the concept. The broad examination of terminological, theoretical, philosophical, and technical aspects related to it, becomes the starting point of the exploration of issues.

1.4.2 Case studies in the application of anastylosis

Case studies of monuments in which anastylosis has been or is currently being implemented are selected, examined, and analytically discussed. Information is extracted by investigating them on a practical case-by-case basis.

1.4.2.1 Criteria for selecting the case studies

Key purpose of the case studies is to extract information on the process of deciding, planning, and implementing anastylosis and to assess the end result from various perspectives, especially its success and the achievement of the desired objectives. The number of case studies was governed by the possibility of exploring in-depth the above-mentioned issues. Therefore, criteria were established for their selection. However, during the selection of the case studies, it became hard to choose monuments that fulfilled all prerequisites. A degree of compromise had then to be employed, according to which criteria were divided between essential and desirable.
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The essential ones were the following:

I. Chronological distribution of projects:

a. Monuments subjected to anastylosis after 1964, when anastylosis was endorsed as an acceptable method of architectural conservation in the Venice Charter. This is the most recent charter that deals directly with anastylosis and is followed in projects throughout the Mediterranean (Demas 1997b, 152). Examination of monuments subjected to anastylosis after its establishment would denote certain issues.

b. Monuments subjected to anastylosis recently. Debates on the validity and effectiveness of the Venice Charter are currently expressed, dividing the conservation community. In this sense, it would be elucidating to review how anastylosis approaches have changed and evolved during the course of time.

II. Specific structure of monuments: dry masonry and autonomous structural members. As it will be shown in the subsequent chapters, the monuments to which anastylosis is applied have a specific structure: they are originally erected with regularly cut pieces of stone, connected to each other with little or no mortar and small metallic joints (see Dimacopoulos 1985, 18; Bouras in AA 1996, 26). In order to thoroughly explore anastylosis, such monuments had to be examined.

III. Availability of documentation with studies, preparatory reports, and final publications. Documentation is of great importance, since a sufficient amount of data is needed for a comprehensive presentation of the monument and examination of the undertaken works. Reports highlighted emerging issues and informed about principles and standards that were followed.

The desirable criteria are:

I. Projects describing the undertaken anastylosis according to the international definition of the word: 'reinstatement of any original fragments that may be recovered' (Athens Charter, Article VI), or 're-assembly of existing but dismembered parts' (Venice Charter, Article 15). Since the research aims evolve focus on the study of anastylosis, its international definition should coincide with the description of the undertaken works.

II. Proximity or direct reference to the international conservation charters, especially the Athens Charter (1931) and the Venice Charter (1964). Both charters officially defined and endorsed anastylosis. The objective becomes the examination
of their validity and sufficiency in guiding such works. However, reference to conservation charters was not judged as fundamental, simply because its absence could indicate their insignificance and, possibly, invalidity for anastylosis.

III. Chronological distribution of projects. Monuments subjected to anastylosis after 1931. In the Athens Charter (1931), anastylosis acquired its official definition. Hence, it would be interesting to examine how the method was planned and applied at these times. Due to the small number of publications regarding anastylosis works undertaken in the first half of the 20th century, it was decided to establish this criterion as a desirable one and examine case studies that combined anastylosis projects undertaken in the 1930’s and recently, so as to identify differences in approaches.

1.4.2.2 Selection of case studies

The selected case studies meet all essential criteria and some desired ones and are the following:

a. The Parthenon and the Erechtheion of the Acropolis of Athens, Greece.
Efforts to re-erect the monuments took place in the 20th century, allowing comparative analysis of the undertaken works. The interventions are clearly identified as anastylosis, as it was the restorer of the Acropolis who introduced the term in the International Conference in Athens in 1931. Works currently undertaken utilise the Venice Charter as their theoretical guide, the structure of the monuments is articulated with dry masonry and individual structural members. The available documentation is exceptionally rich and easily accessible, due to its distribution to university and other libraries. Thus, it fulfilled all essential and desired criteria.

b. The Avaton and the Propylon of the Gymnasium at the Sanctuary of Asklepios in Epidauros, Greece.
Anastylosis and restoration works are carried out in these monuments from 1984, and have not been completed yet. The works undertaken are described as anastylosis according to its international definition, the structure of the monuments follows the ancient system of individual members, while the Venice Charter forms the theoretical guide. Relevant publications are available in university libraries. Thus, the monuments fulfilled all essential criteria and I and II of the desired ones.
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c. The Hellenistic Stoa at the Acropolis of Lindos in Rhodes, Greece.
Anastylosis works took place in 1912-1945 and from the 1990s onwards. The *Venice Charter* provides the theoretical background for the current works, which are not clearly defined as anastylosis. The structural system is in accordance with the relevant criterion. Publications, after partial completion of the project, were available. The monument satisfied all essential criteria, together with II and III of the desired ones.

d. The Library of Celsus in Ephesus, Turkey.
Anastylosis of the façade took place in 1970-1978, the restorers used the *Venice Charter* as their philosophical guide, though they did not refer to it directly, and the structure of the monument comprises of individual members. Documentation was widely available, in published articles, mainly in German, and only a few in English. This project fulfilled all essential and I and II of the desired criteria.

e. The Temple of Trajan at Pergamon, Turkey.
Anastylosis, defined as such, was implemented in the 1990s. There is no reference to charters, despite the fact that the principles respected during the course of works are identical to those endorsed by the *Venice Charter*. The building follows the structure of classical and Roman buildings. Documentation was available in the form of published articles distributed in journals. The works satisfy desired criteria I and II and all essential ones.

f. The Hellenistic Nymphaeum of Sagalassos, Turkey.
Anastylosis, undertaken during the 1990s, is completed and is described as such, though the *Venice Charter* is not mentioned. The structure of the building consists of dry masonry and individual members, while information is available in publications. Thus, the project fulfilled the desired criterion I and all essential ones.

These specific monuments, and not others from the numerous examples found in Greece and Turkey, were chosen because: they form indicative examples since they are popular tourist and educational destinations of visitors; they were easily accessible, in terms of arranging visits; information on their anastylosis was acquired
relatively quickly and easily; professionals who have worked or are currently working in the projects participated in the professional survey (see 1.4.3). However, in some of them, the anastylosis works have not been completed yet, a matter that was not judged as essential for the exploration of relevant issues.

1.4.2.3 Approaches to the case studies

A series of consistent topics were identified. The key research areas focused on the:
- decision-making process
- planning of the works;
- implementation of anastylosis;
- post-implementation aspects.

The process of examining the case studies consisted of the following stages:
- Gathering of information regarding primarily the undertaken anastylosis and, also, the history of the monument and the site in which it is found. University and other libraries, together with archaeological and conservation databases were searched in order to collect information needed for each monument. Then, published data was brought together and was accordingly organised.
- Contacting committees and organisations responsible for the anastylosis projects, including site managers, restorers, archaeologists, architects, and so on. This stage is presented in the section about the professional survey (1.4.3).
- Meticulous study of the monument in question through the data presented in the published resources. The study was inclusive of the architecture and archaeology of the monument and the site. Emphasis was placed on the anastylosis work carried out with regard to its choice, planning, and implementation.
- Field visits to the selected archaeological sites. All the case studies were visited in order to examine the conduct and outcome of the anastylosis, with the exception of the Nymphaeum of Sagalassos. Each field visit consisted of my spending considerable time on site, looking at the site and the worksite, assessing the monument in question and the accuracy of the published data, and undertaking photographic surveys. In those monuments that were at the time being restored, I could not access their interior, due to health and safety regulations. The photographic material collected contributed in highlighting and understanding the issues raised from the study of the monuments.
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Assessment of the anastylosis project. It comprises a brief presentation of the architecture of the monument and its state of preservation and an inclusive outline of the anastylosis programme. Detailed discussion of the objectives of the restorers and their possible achievement follows, together with analytical exploration of the theoretical framework and the practical implementation of the works, as well as an assessment of the project. Specifically, the key-research areas and their sub-themes in the case studies are the following:

- decision-making process – reasons for choosing anastylosis; advantages and disadvantages of the choice and the final result; objectives sought to be achieved; anastylosis as strategy for the conservation and management of the monument and site; assessment of the published data and its correspondence to the actual work; quality of documentation before and during the intervention; driving forces that influenced the choice and manner of anastylosis; collaboration of diverse disciplines; role of the public and provision of adequate information to them;
- planning of works – theoretical framework of the anastylosis; methodology of restorers; respected principles; issues of authenticity and reversibility;
- implementation of anastylosis – technical matters associated with it, such as: the percentage of new and original stone; the extent of intervention; issues of structural stability; the use of new and traditional techniques and tools;
- post-implementation aspects – documentation after the intervention and any other stages after completion of the works.

1.4.2.4 How the results were used
The case studies served the same role as the professional survey (see 1.4.3). Each case presented variety and diversity of approaches regarding the practice. Thus, the research was enriched with further problematic situations and adopted solutions. Similar issues were identified and compared, while diverse ones signified the individuality of cases. The chronological exploration enabled delineation of the way in which anastylosis projects were carried out. Consequently, trends and similarities and differences in past and current approaches were identified.
1.4.3 Survey among professionals in the field of architectural conservation

Survey research is one method of collecting, organising, and analysing data, which can be collected by a variety of techniques (De Vaus 2002, 5). A survey among professionals of architectural conservation was conducted to collect information for describing, comparing, and analysing attitudes and practices of anastylosis. It evolved with the aim of exploring the views of professionals, rather than providing numerical data and statistical analysis. It was planned and designed in accordance to general surveying rules (see De Vaus 2002, Fink 1995, Newman and McNeil 1998). It included identification of the survey objectives, selecting and designing survey instruments, selecting survey participants in accordance to set criteria, administering the survey tools, collecting the data and presenting and analysing its results.

1.4.3.1 Objectives of the survey

Surveys involve setting objectives for information collection, designing research, preparing a data collection instrument, administering the instrument, analysing the data, and reporting the results (Fink 1995, 1).

The objectives of a survey form the statement of its ‘hoped-for outcomes’ (Fink 1995, 6-9). In this sense, the objective of the professional survey was to identify and explore the emerging problems and issues implicating the choice, decision, planning and implementation of anastylosis. These objectives reflected the purpose of the survey and acted as a guide to its choice and development (Newman and McNeil 1998, 3). Specifically, the research questions evolved around the following issues: definition of anastylosis, theoretical and philosophical issues, driving forces, technical aspects, the role of international conservation charters, management issues relating to procedures, and reflections of the way forward. As Fink (1995, 10) and Newman and McNeil (1998, 19-24) underline, the survey objectives derive from a defined need, from reviews of the literature and other surveys, as well as from experts. In this regard and given the lack of relevant surveys in the field, the survey objectives derived mainly from the literature reviews, in which the need for defining and determining anastylosis standards and principles and for improved interventions, within the context of architectural conservation and heritage management, was identified.
1.4.3.2 Methodology of the survey

The survey design followed the descriptive format, according to which information on practices and relevant issues was extracted from the respondents (see Fink 1995, 25). The next step was to prepare a reliable and valid data collection instrument (Fink 1995, 1 and 41). Two particular types of survey instruments (Fink 1995, 42) were employed: self-administered questionnaires and interviews in person. To these, correspondence via letters and emails was added, decided upon difficulties of professionals to respond to the questionnaire, since it admittedly required some amount of time to answer the questions. Additionally, a few professionals preferred not to respond to specific questions, mainly due to their limited participation in anastylosis projects, but rather to outline their views in simplest forms. Moreover, because of difficulties that emerged from attempting to interview in person, interviews and mail correspondence were combined into one survey instrument: general correspondence. The use of each survey instrument depended on the possibility of contact and availability of the interviewee, on available resources (in terms of time and costs), and on the kind of information to be extracted from each professional.

a. Self-administered questionnaire

A self-administered questionnaire consists of questions one completes by oneself and is either mailed or computerised (see Fink 1995, 42; Newman and McNeil 1998, 25-26). The questionnaire was extensively utilised, since it allowed for time, consideration and planning of answers, as well as for the possibility of including comments and suggesting references. It extracted detailed information and provided the participants a certain flexibility to answer at their convenience. It overcame obstacles, such as geographic locations, costly and stressful phone calls, which do not allow for analytical responses.

The procedure followed for administering the print questionnaire included the postage of a hard copy, together with a covering letter explaining the scope of the undertaken research to participants. To elicit a higher percentage of responses, upon receipt of a sufficient amount of completed questionnaires, a brief report is currently prepared for circulation among participants. The report outlines the responses to each question and the general outcome of the survey. The above process was followed in
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accordance to guidelines for promoting responses, as they are presented by Fink (1995, 38 and 89).

Additionally, a digital version of the questionnaire was designed and published at the web (http://www.ucl.ac.uk/~tcmkva/index.html). Its structure and design were the exact ones used in the print questionnaire. Emails and requests for completion were circulated among conservation, heritage, archaeological, and architectural newsgroups and discussion or mailing lists (Heritage List, Conservation-Research List, and Conservation DistList). The digital form was adopted to ensure a wider participation. It bridged gaps created by geographical distances or unavailability of contact information for various participants.

The questionnaire is entitled ‘Anastylosis Questionnaire for Relevant Professionals’ (Appendix B1). Guidelines for completing it explain general aspects of the questions and include instructions on how to answer them. The Main Body is divided into six sections, each dealing with the multitude of issues related to anastylosis.

The first section, entitled Definition of Anastylosis, explores how professionals perceive anastylosis. In sequence, main differences and similarities between anastylosis, restoration, reconstruction, and the grounds on which they are applied, are explored. The geographical location of monuments subjected to anastylosis is brought under question, together with the importance of a more complex and detailed definition of the method than the one provided by the Venice Charter.

The following section, entitled Theoretical and Philosophical Issues – Driving Forces, enquires after the theoretical framework embracing anastylosis applications (reasons for anastylosis application; issues of integrity, authenticity, interpretation, preservation of historic memory, and respect for values) and assesses the role of the driving forces (national and cultural identity, education in relation to interpretation and improvement of the legibility of the monument, tourism and financial aspects).

The section on Technical Issues combines questions scrutinising the technicalities of anastylosis implementation. Identification of monuments that can be subjected to anastylosis, necessity of determination of the quantity of original material that
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Justifies the practice and the state of its preservation are investigated. The choice of new material, the reasoning for its use, and its differentiation from the original are surveyed. The use of connecting material and the preservation of the ancient structural system, as well as the employment of ancient or modern working tools and of new or traditional methods are challenged.

The subsequent section, entitled Charters, focuses on examination of the charters that set the theoretical framework and the principles overseeing the decided intervention. Questions also explore the interpretation of their principles, the possible delineation of extra principles, and any problems encountered during the intervention.

Management Issues are examined too. Procedures for approval of anastylosis decisions and their assessment are investigated and the co-operation of disciplines is determined. Finally, Looking Forward attempts to define whether the establishment of a methodology or an amendment to an existing conservation document is needed and, if so, whether it should comprise theoretical, philosophical or technical issues.

The questionnaire consists of forty-three questions. These questions are both purposeful – the respondent identifies the relationship between the intention of the question and the objectives of the survey – and complete – they express one entire thought (see Fink 1995, 13-14). Both open – when the respondents use their own words – and closed – when the answers are pre-selected for the respondents – types of questions are employed (De Vaus 2002, 99; Fink 1995, 15). Open questions were deemed useful because the intricacies of some issues were unknown, for getting unanticipated answers, and for describing topics from the point of view of the respondents. However, these were limited. Closed questions form the majority of the formulated questions, as the results lend themselves more readily to interpretation and some statistical analysis, even though the latter was not the exact intention of the researcher. In addition, because the respondents’ expectations are more clearly spelled out in closed questions, the answers had a better chance of being more consistent. Nevertheless, each closed question provides an additional option which allowed more flexibility and the possibility of extracting quotable material (see Fink 1995, 15-16). Considerable attention is paid to the wording of the questions, so that they are clear and unambiguous (see De Vaus 2002, 97).
The choices given to respondents for their answers took two forms: nominal or categorical – which have no numerical or preferential values – and ordinal – in which respondents are asked to rate or order choices (see Fink 1995, 17). Additionally, an important principle in developing the question responses was to ensure that they are exhaustive, with the response alternatives providing a sufficient range of choices to cover all respondents (see De Vaus 2002, 101).

The questionnaire attempted to include multiple issues in a multilateral way and extract as much possible information regarding current practices and trends. Exploration of speculations and problems that arise was a crucial element. Therefore, the ability to suggest alternative options was provided. Emphasis was unequivocally placed on the acquisition of a variety of opinions without limiting options and with a view to compiling diverse ideas and practices.

b. General correspondence via letters, emails, and interviews

This survey tool gave the chance to professionals to focus on their own field of expertise. They were direct and thorough in revealing information, but were used only when flexibility existed. Their success was relatively limited, because of difficulties in meeting participants in various geographical locations and the reluctance of many professionals to be interviewed.

The interviews in person were constructed using the same consideration as the questionnaires (Newman and McNeil 1998, 27) and examined the same issues in a more compact and concise way (Appendix B2), with the added dynamic of interaction. Questions explored the meaning of anastylosis as a term and as a method, as well as in relation to restoration and reconstruction; the identification and assessment of driving forces; the structure of monuments in which anastylosis is applied; the amount and state of preservation of surviving material; issues related to completions and additions; the use of new or traditional methods, techniques, and tools; the professions that collaborate; respect for principles of reversibility and authenticity; respect for the values of the monument; assessment of international charters, particularly the Venice Charter; evaluation of anastylosis implementations; and what is/should be the way forward.
Correspondence with emails and letters was quite successful, since a great number of discussions took place. It gave flexibility to participants to express their views solely in their field of expertise. Such discussions proved extremely useful and stimulating. They offered a view and insight to paramount issues. They served the same role as the comments encouraged throughout the questionnaire and provided the researcher with the possibility of exploring further issues deriving from the denial or reluctance of professionals to participate in the survey.

1.4.3.3 Criteria for selecting the participants of the survey

Setting criteria for inclusion and exclusion of participants in a survey is an efficient way of focusing the survey on only these people from whom the most accurate and relevant information can be acquired (Fink 1995, 29). As this survey aspired at confirming certain ideas and practices and extracting further information on anastylosis, exclusion criteria were dismissed and gravity was placed on inclusion ones. These related to the involvement of professionals in:

♦ anastylosis projects in sites around the Mediterranean region;
♦ international or national conservation and restoration institutes;
♦ archaeological institutions, organisations, committees, universities;
♦ heritage organisations and institutes.

Consequently, practitioners of anastylosis, involved in such projects as individuals or as members of relevant institutions, were contacted. Professions were as varied as possible amongst archaeologists, architects, architecture historians, civil engineers, geologists, conservators, and heritage managers. The represented organisations covered a wide range of university and research centres, as well as governmental and non-governmental institutions. This variety resulted in the acquisition of a diversity and plurality of ideas and opinions and the extensive coverage of issues.

1.4.3.4 Selection of participants

The procedure of contacting professionals was divided into different stages. In the beginning, attempts were made to communicate with specialists that have written or write about anastylosis and architectural restoration. This was in accordance to rules of purposive sampling – a form of non-probability sampling where cases are judged
as typical of some category of cases of interest to the researcher. Although this does not necessarily ensure representativeness, it may provide useful information (see De Vaus 2002, 70 and 90; Newman and McNeil 1998, 49-50). Organisations were also approached to seek the contact details of anastylosis practitioners. The process abided by the snowball non-probability sampling in that it relied on previously identified members of a group to identify other members of the target population, particularly when such listings are not easily available or do not exist (see Fink 1995, 34).

Initially, it was possible to contact various international archaeological and restoration organisations and institutions and extract information on certain people, in terms of names, contact details, and specific interests. Often, contact with organisations depended on the willingness of those on the other side to share information by replying to requests for publications, information on procedures and lines of action, as well as on provision of contact details for individual professionals. Major national organisations and services in Greece, Italy, and Turkey were contacted in request of response to the questionnaire or any other information that could be disclosed. Unfortunately, this was ineffective. Many Greek regional services referred the researcher to the relevant Restoration Directorate, which had previously been unsuccessfully contacted. Other services could not provide any information due to the lack of anastylosis works in the region. From the Italian regional authorities there was only one response, while there was no response from the Turkish authorities.

Hence, the remaining option was to communicate with individuals working independently or as representatives of conservation and research institutions. Attempts were, comparatively, more fruitful. Many professionals responded, providing information on case studies, publications, contacts, and positive reception of the survey. Those who did not wish to take part in the survey explained their reasons why. Some did not manage to take part simply because of comparative difficulties in responding to the questions. In cases where it was possible to meet some professionals, conclusions regarding their reluctance to participate or discuss the whole subject matter and clarify their positions were reached.
1.4.3.5 How the results were used

To analyse the findings a variety of scholarly methods were utilised, such as descriptions, relationships, and comparisons (see Fink 1995, 53). However, no statistical analysis is offered, as mentioned in the beginning of the chapter, because the aim of the survey was to identify and explore the views and ideas of professionals rather than reach certain conclusions regarding the concept and practice of anastylosis. For this reason, not much emphasis was put on the use of tools (such as lists, charts and tables) to present the acquired data (see Fink 1995, 69). The analysis rather focused on the description and interpretation of the responses and the presentation of the quotable material.

Thus, the results deriving from the answered questionnaires were meticulously analysed. Answers were classified according to each question and were succeeded by their detailed presentation and analysis. Groups of questions were comparatively examined. Analysis of the interview answers was in accordance with the main issues identified in the questionnaire and was performed on the same grounds. The comments of the survey participants were reviewed in relation to each question that instigated them and in a wider context. Comments and observations of professionals, with whom correspondence was established, were integrated into them.

Hence, major aspects were explored and assessed:

- Determination of anastylosis as a concept and as a practice.
- Theoretical and philosophical issues, and the role of driving forces.
- Technical issues.
- Anastylosis and the international conservation charters.
- Procedures for anastylosis decision, planning, and implementation.
- Identification of the way forward and further suggestions.

Studying the answers attempted to identify and explore trends, if any, among countries, restoration schools, and organisations, as well as to establish patterns.

The presentation of the responses of the participants, acknowledging the ethical responsibilities – as stressed by most professional codes of ethics – towards survey participants: voluntary participation, informed consent, no harm, confidentiality,
anonymity, and privacy (see De Vaus 2002, 59) – can be found in Chapter 6. It has the form of descriptive research that deals with questions of what things are like and not of why they are not that way (see De Vaus 2002, 18). Generally, the analysis and interpretation of the data of the survey was based on the defined objectives of the survey. All the data gathered and every question asked were specifically related to these objectives. In this regard, the descriptive nature of the research meant that the survey was designed and conducted to describe and discuss the answers of the respondents (see Newman and McNeil 1998, 55-56).

1.4.4 Survey among the visiting members of the public
Visitor surveys are an essential tool in tourism and leisure management, as they provide vital data on the activities and attitudes of users and non-users, in a cost-effective and efficient way. They are undertaken to meet several objectives, among which are to collect information on attitudes and opinions regarding the venue or location (Elwin 2001, 1-7 and 47). A type of visitor survey, in the form of a questionnaire, was employed in order to explore the views and opinions of the public visiting monuments subjected to anastylosis.

1.4.4.1 Objectives of the survey
This particular questionnaire is a so-called visitor survey. It was not undertaken as such, but rather to highlight the main issues emerging from anastylosis and their understanding by the visiting public. It attempted to touch upon matters related to heritage management and conservation and the involvement of the public in the decision-making and implementation process. It could not follow the rules of a visitor survey, because time was exceptionally limited. It was not employed as a major methodological tool, since its objectives can readily form the basis of another research. It aimed at providing some views of the public opinion and underlining their importance in a thorough approach to monument restoration.

1.4.4.2 Methodology of the survey
The places in which the survey took place were three different archaeological sites: Athenian Acropolis, Acropolis of Lindos at Rhodes – both in Greece – and Ephesus in Turkey. These sites were chosen as they already formed case studies of my thesis. Their selection was in accordance with the requirement of determining the location
of the interviews, partly by the objectives and nature of the survey (Elwin 2001, 14-17). The conduct of the survey took place near the archaeological site or outside the area. Occasionally participants were selected at random with the requirement to have visited one of the sites within the last three months. Rules of approaching and sampling the public were not followed. The idea was to mainly highlight the needs of the visiting public, in terms of how they perceive restoration and the driving forces that influence its implementation, as well as whether they wish to be involved or not at any stage in the process.

The questionnaire (Appendix B3) consists of eighteen questions. Initially, the understanding of anastylosis by the public is examined. One section deals with the driving forces and how the public perceives their role. Another section explores the preferences of visitors and their assessment of anastylosis in terms of its reasons for implementation and the result. Finally, the issue of public involvement in decision-making and planning of conservation is explored. The last questions look at the demographic data deriving from those questioned.

1.4.4.3 Criteria and selection of survey participants
Surveys should make a basic decision about who the respondents should be and how they should be defined (e.g. users and non-users, visitors and locals) (Elwin 2001, 12-13). This survey did not aim at particular groups but addressed the visiting public in its entirety. It provided the demographic data of those questioned to illustrate who these visitors were, mainly local people, day visitors, and tourists, according to their classification in the visitor studies field (see Binks et al. 1988, 24).

1.4.4.4 How the results were used
The answers were analysed individually and in groups identifying the main issues, specifically the assessment of the understanding of conservation and anastylosis, the perceived influence of the driving forces, the public involvement and consultation in practices. The analysis offers an insight into the public view, and can enlighten professionals about the need of addressing the public in their approaches.
1.4.5 Analysis
The final stage of the methodological exploration of the results derived from questionnaire responses, interviews, informal discussions, and examination of case studies, as well as the investigation of anastylosis issues and the current theories and practices of site management and conservation through the literature review.

This led to classification of issues and analysis of problematic matters with regard to the decision-making, planning, implementation, and post-implementation of anastylosis, corresponding to its history and importance, its definition as a concept and as a practice, its reasons and objectives, its theory, the driving forces influencing its implementation, and the technical matters associated with the practice. Ideas and concepts were subject to cross-comparisons. The above-mentioned themes were drawn out and comparatively discussed. Their analysis, according to the specific objectives of the thesis, brought together all observations, as well as individual aspects that occasionally emerged in the case studies.

Thus, final conclusions were drawn. The outcome of this research was achieved by identifying problematic areas in anastylosis, highlighting adopted solutions and proposing ways for recognising their importance for successful undertakings and resolving them. These remarks accompany a series of delineated guidelines to be followed in anastylosis, specifically in Greece and Turkey, but with wider applications too. The guidelines attempt to create a framework for anastylosis-related issues, from decision-making aspects to planning, implementation, and post-implementation matters, particularly theoretical principles and technical matters.

1.5 Structure of thesis and outcomes
Anastylosis has been determined as a practice, in relation to the objectives it seeks to achieve and its being an intervention strategy of archaeological management and conservation. It has been defined with regard to the structure and geographical location of the monuments and its extent. The concept has been established from a theoretical and philosophical perspective. Technical aspects have been scrutinised while the decision-making process has been identified and assessed. Problems
encountered have been explored. Special reference has been made with regard to monuments subjected to anastylosis, though they had been restored in the past.

This research was conducted in a relatively small-scale manner so as to identify these issues, to assist and encourage the practitioners in adopting a meticulous, yet individual interventive approach to specific monuments, and to advance further research on this widely used and historically significant concept and method.

The thesis is structured as follows:

*Chapter 1: Introduction.* It provides the reasoning for deciding upon the specific topic and the methodology of researching anastylosis.

*Chapter 2: The context of cultural heritage management.* It places the debate on anastylosis into the wider framework of site management and conservation.

*Chapter 3: Anastylosis: current issues.* It analytically presents the issues and debates on anastylosis.

*Chapter 4: Case studies from Greece.* Anastylosis projects in Greece are examined.

*Chapter 5: Case studies from Turkey.* Anastylosis projects in Turkey are examined.

*Chapter 6: Professional and Visitor Surveys.* The results of both the professional and the visitor surveys are presented.

*Chapter 7: Discussion of the issues raised from the concept and practice of anastylosis.* The concept and practice of anastylosis is discussed, according to the specific objectives of the thesis.

*Chapter 8: A methodological approach to anastylosis, including its redefinition and guidelines for its implementation.* The redefinition of anastylosis is presented, together with proposals for a methodological approach to anastylosis with the relevant guidelines.

*Chapter 9: Critical evaluation and concluding remarks.* They include a critical evaluation of the undertaken research, proposals for further research, and the underlining of the significance of this research for anastylosis.

*Appendices.* They incorporate: photographic material acquired during the visits to the case studies; the employed survey instruments; references on anastylosis within the international conservation framework; the history and the anastylosis programs of the monuments selected as case studies; a glossary of architectural terminology; information on the survey participants; and the extended version of the produced recommendations for planning and implementing anastylosis.
CHAPTER 2: THE CONTEXT OF CULTURAL HERITAGE MANAGEMENT

2.1 Background

The modern concepts of heritage protection and conservation derive from the historical consciousness that developed in Europe in the 18th century (Jokilehto 1996, 56). They were systematised in the 19th century, when ‘European nations identified themselves with their material heritage’ (Lowenthal 1985, 385).

In the 20th century conservation was considered as another way of looking at art and cultural heritage (Melucco Vaccaro 1996a, 202-204). Intensive architectural conservation after the Second World War, because of the fear that people would lose their identities by losing their heritage (Gazzola 1972, 30; Melucco Vaccaro 1996a, 205), indicates the impact of identity. Additionally, recognition of the rights of the community was first introduced by the Athens Charter (ICOMOS 1931), while the need to apply conservation and restoration within the framework of individual cultures and traditions is acknowledged in the Venice Charter (ICOMOS 1964).

Recognition of cultural adversity and of preserving the values of living communities led to re-assessing the meaning of heritage and the policies for its protection (Jokilehto 1999, 18; Philippot 1996a, 218-219). Conservation further evolved from dealing with ‘historic and artistic work of the past’, to include ‘more modest works’, and recognised European heritage as ‘the common heritage of all her peoples’ (Gazzola 1972, 30; Jokilehto 1999, 290).

Earlier romantic approaches to restoration gave way to scientific approaches and coherent philosophies, developed in Europe, but applied worldwide (Stanley Price 2003, 285). Conservation was defined as specialisation and independent field of study and was included in the activities of national and international organisations (Melucco Vaccaro 1996a, 204-205; Philippot 1996a, 216-217; Pye 2001, 49).

These organisations developed awareness of heritage and promoted collaboration for its protection and safeguarding. Such were the United Nations Educational, Scientific
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and Cultural Organisation (1945), the International Centre for the Study of Preservation and Restoration of Cultural Property (1956), the International Council of Monuments and Sites (1965), and many more. They formed conventions with legal force for the signatory countries and recommendations or charters as guidelines on practical actions, defining conservation standards and setting codes of ethics for heritage protection (Bell 1997, 1; Frin 1966, 83; Jokilehto 1996, 57-66).

Conservation principles established in these documents derive from the thought of restoration theoreticians who contributed to the development and advance of restoration theory. For instance, Gustavo Giovanoni's theories influenced the delineation of the *Athens Charter* (Erder 1986, 101-102; Jokilehto 1999, 219-222).

Modern conservation principles refer to art and history as criteria for selecting monuments for preservation (Silva 1983, 10-11). Cesare Brandi was a pioneer in emphasising the historical and artistic-aesthetic dimension of restoration of art and architecture (Jokilehto 1999, 228; Philippot 1996a, 217). His definition of restoration entailed that restoration 'forms the methodological moment of the recognition of the work of art in its physical durability' (Brandi 1963) and that it should follow historical principles (not to destroy traces of the passage of time and human intervention) and aesthetic ones (to remove erroneous completions and inappropriate alterations) (Cordaro 1994, 15-17; Jokilehto 1999, 224-233; Melucco Vaccaro 1996a, 207-209). He aimed at a systematic philosophical outlining of restoration, which consists of a general theory and specific principles. He also illustrated the critical process required by modern restoration. His phrasing of the restoration theory was influential for the development of conservation policies at international level, being a reference when writing the *Venice Charter*, and is until now dominant in training programs and in delineating conservation policy statements and guidelines (Jokilehto 1996, 67; 1999, 237; Karadedos 1984, 52).

The 20th century conservation attitudes emerged as a reaction to excessive interventions and encouraged more appropriate approaches to preserving monuments. These included concepts of preventive care, limited and visible interventions, reversible treatments, and compatible materials (Pye 2001, 51; Stanley Price 2003, 285). Ideas were further developed with time and with experience gained
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from practices, particularly the principle of minimum intervention. The most general principles are now: recording and research before intervention; minimum alteration of fabric; minimal risk of damage or uncertainty in intervention and selection of materials; reversibility of intervention; retention of maximum of the original structure; distinguishable use of new material; respect for the setting; preference for original materials and workmanship; and longevity of work (Warren 1996, 39-48).

Others were further enhanced. For instance, the respect for the values of monuments initiated from historic and artistic ones, as endorsed by the Athens and the Venice Charters and Camilo Boito (see Gazzola 1972, 30), and was analytically classified by Alois Riegl (Jokilehto 1999, 216-217). It reached the point of recognising multiple values attributed to heritage by those who value it (Burra Charter). Additionally, conservation and preservation of the setting, initially established in the second half of the 20th century (Frin 1966, 97), is nowadays undertaken.

Currently, preservation and presentation of ancient monuments form part of the wider process of heritage management, from which important problems derive. Various degrees of intervention are employed, aiming at structural protection and conservation and being interwoven with issues of interpretation, education, identities, and tourism. Restoration theories have developed, accompanied by technological experimentation. Debates question motives and practices, as ‘the propriety of restoration generates passionate dispute’ (Lowenthal 1985, 278-282). Attitudes to what is acceptable in heritage management and conservation have radically changed and are still changing. Thus, the development of anastylosis and its applications have developed within different contexts, but need to be re-assessed in the light of the current issues and debates in the field.

2.2 Heritage Management and Conservation

Conservation has now obtained an officially recognised position in many countries. As heritage is tangible evidence of the past and the basis of the modern world, it is acknowledged that critical approaches for conservation are needed. Principles and theories are challenged, terminology should correspond to the needs of the multidisciplinary field and technology should be used wisely (Jokilehto 1985, 11).
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The treatment and care of cultural resources raise many questions, so it is important to intervene carefully. Therefore, the rule of thumb for many conservators maintains that it is ‘better to preserve than restore and better to restore than reconstruct’ (McManamon and Hatton 2000, 16). Hence, discreet interventions are favoured.

Besides, new concerns have emerged, as scientific environmental surveys show that aggravated damages are owed to excess of visitors. Causes of damage are not easily eliminated and elimination may not be within the province of conservation authorities. However, no theory is effective if it does not consider sustainable uses and the environmental quality (Melucco Vaccaro 1996a, 204-206). Thus, heritage management includes environmental sustainability (Jokilehto 1999, 292).

Hall and McArthur (1998, 3-5) summarise the points that management should address, particularly the ownership and development of heritage; its conservation and the reasons behind it; the needs of visitors and communities, the identification of management goals and the appropriate means for achieving them. In this regard heritage management recently changed focus: from conserving the resource to finding an appropriate balance between visitors in the 1980’s and paying attention and understanding the human dimension of heritage, and to recognising that there are multiple meanings attached to heritage by the 1990’s. Hence, planning is now considered essential. Although, as Sullivan (1997, 16) reveals, managers may object to formal planning, unplanned approaches lead to decisions that have negative consequences in the short and long term.

Thus, fundamental aspect becomes the conduct of management and conservation plans. As Aplin (2002, 75-76) specifies, conservation plans are involved with the recognition of heritage sites and the active aspects of conservation, while management plans are concerned with maintenance and preservation of values and include aspects of finances, marketing, visitor management, as well as strategies.

The Charter for the Protection and Management of the Archaeological Heritage (ICOMOS 1990) confirms that the aim of management should be the preservation of monuments in situ and sites, as well as their long-term and conservation and
curation. The charter endorses integrated policies relating to land use, development and planning, as well as cultural, environmental, and educational ones. It stresses the importance of effective collaboration between professionals from many disciplines and the participation of the general public.

Physical interventions (stabilisation, anastylosis, restoration, reconstruction, and so on) should be central in the management policy for the site. In this regard, it is endorsed that ‘any intervention must be consistent with the significance of the place and its management policy’ (Sullivan 1997, 24). Consequently, all intervention methods become part of heritage policies and are interrelated with the efforts to enhance the significance and ensure preservation of the site. Thus, anastylosis will be examined within the framework of heritage management and decision-making.

The systematic development of a theory and methodology of intervention and an empirical perspective can establish its extent and nature. It only becomes problematic when moving from theoretical premises to practical intervention. This is why Carbonara (1996, 237) maintains the need for transforming the theoretical framework into ‘practical principles that cannot be considered empirical’, exactly as Brandi (1963) had confirmed. Although codes of practice and guidelines, with increasing degrees of specialisation, are widespread, it is doubtful whether there is need for new ones or not. It is considered helpful if countries and cultures adopted a procedure whereby conservation decisions would be taken on a widely accepted ethical basis (Brimblecombe et al. 1997, 390; Burman 1997, 285).

2.3 Current Issues and Debates in Archaeological Conservation and Management

2.3.1 Kinds of intervention: terminology and meanings

There is a certain variety according to the degree, extent, and manner of the kind of physical intervention to archaeological heritage, while differences appear between national terminologies and different contexts.
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Conservation is generally understood as a multidisciplinary activity (Jokilehto 1996, 66-67). It forms an integral part of heritage management, as the covering concept for combinations of different interventions, according to most charters. Conservation activities prevent and/or rectify deterioration effects, balancing the needs for heritage access and use with long-term preservation (Coremans in Berducou 1996, 253; Feilden 1994, 3; Pye 2001, 24).

Restoration is considered the form of treatments applied to monuments to return them to a known earlier state (Coremans in Berducou 1996, 253; ICOMOS New Zealand 1992). It enhances their aesthetic and historic values (ICOMOS 1964).

Conservation and restoration are presented as alternative choices and differentiation of their objectives is acknowledged (Berducou 1996, 253; de Guichen 1999, 4; Pye 2001, 29). Conservation aims at minimisation of deterioration and restoration should facilitate interpretation (Feilden 1994, 9; Pye 2001, 29). National and international associations distribute individual interpretations, which may differ from country to country and even within countries (Berducou 1996, 253; de Guichen 1999, 4). In Italy, the concept of restoration describes conservative treatments, while in English the term has been replaced by conservation (Berducou 1996, 254; Jokilehto 1996, 67). In other European languages and contexts, restoration covers both the activities of restoration and conservation (Pye 2001, 26).

Reconstruction is determined as partial or full-scale rebuilding of a monument. It should be based on archaeology, archival research, or physical evidence (Jameson and Hunt 1999, 35), prerequisites established in the charters. On the other hand, anastylosis – meaning re-assembly of the dispersed members of structures – was introduced in the Athens Charter and was endorsed, by the Venice Charter, as an acceptable form of architectural conservation with wide applications. In Greece and Italy, it also implies restoration.

Other interventions, considered as conservation processes, according to the New Zealand and the Burra Charters, include preservation, which means maintenance of the fabric in its existing state and delaying deterioration; repair; maintenance, meaning the continuous protective care of the fabric and setting of a place;
stabilisation, which protects a monument from decay; adaptation, also known as rehabilitation, which means modifying a place to suit the existing use or a proposed use (Australia ICOMOS 1999; ICOMOS New Zealand 1992). Further options include consolidation, implemented to ensure the continued durability or structural integrity of monuments; preventive/indirect conservation, related to controlling the environment of cultural properties by preventing decay and damage; and reproduction, which entails copying an artefact in order to replace missing or decayed parts (Feilden 1994, 9-11).

It appears that no strict boundaries are found between the different interventions to monuments, as overlapping areas are noticed. However, primary objective of each treatment is, ideally, the contribution to understanding and safeguarding heritage.

2.3.2 The appropriate scale of intervention

Debates on the appropriate scale of intervention are endless. In restoration, anastylosis and reconstruction, additions with new materials are utilised, but no references regarding their extent are made in the charters. Common aim is full or partial re-instatement of the form of the monument, as nearly as possible in restoration and anastylosis, and as exactly as achievable in reconstruction.

Thus, the extent and location of new work should be well thought-out. Feilden and Jokilehto (1999, 65) suggest consideration of its objectives. It is also acknowledged that the historical character and scientific data of monuments should be safeguarded, by respecting their nature and securing lifelong preservation (Feilden and Jokilehto 1998, 65; Schmidt 1997, 50). This is why policies of minimum intervention, ascertained by minimum alteration, minimal risk of loss or damage of fabric, and retention of maximum of the original structure (Warren 1996, 39) have prevailed.

Minimum intervention was introduced as a concept in the beginning of the 20th century and the Madrid Conference (Demas 1997b, 151) while, at that time, Alois Riegl approved minimum intervention and limited restorations (Jokilehto 1999, 218-219). Brandi endorsed minimum intervention and systematised the concept of reversibility (Brandi 1963; Cordaro 1994, 20-23; Melucco Vaccaro 1996a, 207). He formulated three principles, which have influenced the articulation of relevant
principles in the *Venice Charter*. Accordingly, re-integrations, not offending the unity that is restored, should be easily recognised; the part of the material that directly results in the images, so far as it forms the aspect and not the structure, is irreplaceable; restoration should be undertaken in a way that it will not impede future interventions, but rather facilitate them (Brandi in Jokilehto 1999, 236).

Thus, the concept of reversibility was introduced to warrant towards re-establishment of the previous condition of a monument (Petzet 1995, 94). It ensures that actions can be reversed and that future access to evidence incorporated in the building is possible (Feilden and Jokilehto 1998, 59).

However, as Oddy (1999, 4-5) underlines, in the past, reversibility was taken to mean that any material added to an object should be easily removable, yet now it includes all conservation processes applied to antiquities. Eventually, it was realized that reversibility constitutes a guiding principle that is neither absolute nor attainable (Munoz-Vinas 2005, 186; Oddy 1999, 5; Palazzi 1999, 175; Schniewind 1987, 107-108; Seeley 1999, 161). According to the discussion on the concept, various ideas have been projected. Smith (1999, 99-100) and Appelbaum (1987, 65 and 71) suggest that professional judgement and proper consideration should substitute the philosophy of reversibility, since the term itself is attributed different meanings by various conservators. Thus, a more precise definition should be developed and established (Smith 1999, 103). Other suggestions focus on examining the idea of reversibility in relation to all parts of a treatment, to the many kinds of objects, and to the wide variety of treatment techniques (Appelbaum 1987, 65-66).

Additionally, the experience that reversibility is not always achieved has led to the development of alternative notions, such as removability – acknowledging that a material may have an effect upon the object it is contact with, which is not likely to disappear even after the material is removed – and retreatability – which only requires that a give treatment does not make future treatments impossible (Munoz-Vinas 2005, 187).
Despite all the above, it is acknowledged by many professionals that the advantages of the notion, if the notion is not perceived as absolute, can outweigh the disadvantages (see Smith 1999, 101-102; Munoz-Vinas 2005, 185-188).

2.3.3 The role of preventive conservation
Preventive conservation is not a new idea, being employed since the Greek and Roman antiquity. With the development of professional restoration in the 19th century, interventive methods became common (Koller 1994, 1-7). Preventive conservation re-appeared to respond to drastic changes in environment and heritage and reduce deterioration risks (de Guichen 1999, 4; Kissel 1999, 33). Lately, it gained ground as it frequently forestalls the need for major interventions and reduces conservation costs (Feilden and Jokilehto 1998, 64; La Rocca and Nardi 1994, 24). It is enacted through condition surveys; environmental monitoring and control; disaster plans; storage, display and handling policies; and testing of materials (Caple 1994, 65). In conclusion, employing preventive conservation is a way of planning ahead by eliminating damaging factors and avoiding extensive interventions.

2.3.4 Collaboration of disciplines and instigation of new technologies and training in conservation
In the 20th century, conservation became closely connected with scientific approaches. Argan and Brandi underlined the need for a unified scientific basis of restoration (Jokilehto 1999, 223-225). The Athens Charter emphasised the collaboration of architects and scientists, while the Carta del Restauro Italiana (1932) endorsed conservation as interdisciplinary science (Burman 1997, 279-281). However, it is sustained that nowadays interdisciplinary approaches are seldom put into practice (Torraca 1996, 442).

Despite the above, modern technology is endorsed because it has the potential to obtain knowledge on the behaviour and condition of structures and materials. Methods and products that allow consolidation, preservation, and recovery of damaged structures (Jokilehto 1999, 299-300; Sanpaolesi 1972a, 49), as well as replacement of ancient elements by durable materials (Frin 1966, 92) are developed.
Yet, efforts are made to limit the injudicious usage of modern technology, especially through the *Venice Charter* (Silva 1983, 10-11). New technologies are thought to not replace a working knowledge of traditional crafts and materials (Linstrum 1996, 116). Thus, a tendency towards traditional workmanship is frequently noted in restoration projects worldwide. Feilden (1994, 12-18) maintains that good workmanship is achieved by proper training, continuity of work, and respect for the status of craftsmen, while experts should respect each other's contribution and form a team. According to Camuffo (1997, 65) such co-operation can bring a global view to conservation problems and allow amalgamation of different viewpoints.

Ideas about training in conservation emerged through the *Sixth International Congress of Architects* in Madrid (Demas 1997b, 151; Jokilehto 1996, 55-56). The importance of specialised training and the multidisciplinary nature of conservation are prioritised in the charters, yet, training developed quite late. Courses and initiatives originate in the mid-20th century. ICOMOS established an International Training Committee, which has endorsed *Guidelines on Education and Training in the Conservation of Monuments, Ensembles and Sites*, while ICCROM has been organising courses in heritage conservation since 1962 (Jokilehto 1999, 289).


### 2.3.5 The concept of authenticity and emerging issues

Authenticity and integrity were initially thought to indicate originality and material completeness, but now comprise abstract attributes too (Pye 2001, 58). Integrity refers to material wholeness, completeness, or entirety. In sites, it refers to elements that make up an *organic* whole (Jokilehto 1999, 298-299). Notably in the East – Asia, including China, India, Japan, and surrounding regions – priority is given to preserving function and significance rather than material remains. In the West – Western and Central Europe, including countries whose identity and culture derived
from European culture – efforts are made to preserve the ruin just as it is. Both conceptions are considered plausible, neither is ‘right’ (Price 2000, 213-215; Wei and Aass 1989, 5). Interestingly, these diverse approaches are attributed to differing philosophical approaches to the world. As Wei and Aass (1989, 8) argue, in the West, Greek philosophers developed a concept about the identification, analysis, and classification of objects. In this context, architectural heritage underlines historical legibility. Yet, the Chinese traditional philosophies emphasised communication of deeper meanings by individual objects. Hence, continuous repairs or rebuilding may change the physical form, but the spirit of the original is preserved as continuity.

Nishimura (1995, 175 and 183) explains that the perception of authenticity is not static in Asian countries, as they have witnessed rapid economic and cultural changes and their perception of cultural properties is different from Europe. Besides, in Japan, restoration needs derive from its geographic conditions and the humid, high-temperature climate (bio-deterioration, typhoons, earthquakes) (Larsen and Ito 1990, 18). Thus, wooden buildings – wood is a popular building material in Asia – require frequent maintenance and repair with partial dismantling, which is facilitated by the particular construction system. Yet, with Buddhism, keeping the original material was endorsed and, soon, new attitudes, similar to European ones, were introduced (Larsen 1988, 15-16; Larsen and Ito 1990, 17-18).

Related to authenticity is the concept of dead and living monuments, introduced by the Sixth International Congress of Architects (1904) in Madrid (Demas 1997b, 151; Jokilehto 1996, 55-56; Locke 1904, 344). Dead monuments belong to a past civilisation and, hence, their preservation should prevent their natural decay. Living monuments continue to serve the purposes for which they were originally intended and they should be restored so that they continue to be of use.

However, problems emerge in their preservation and in assessing their authenticity. Difficulties in reaching a compromise between people still using monuments and conservation conditions surface (Inaba 1995, 330-331). In this view, Indonesians acknowledge that authenticity can be respected multilaterally when restoring living heritage (Samidi 1995, 389). The concept was initially related with ruined monuments brought to light by archaeological excavations (Erder 1995, 29). It has
now been abandoned in the western context, though, up to a point, it efficiently directed conservation approaches. It has probably been forsaken due to the nature of such definitions – too absolute as far as dead monuments are concerned and too abstract regarding living monuments – and the subsequent difficulties in classifying monuments as either.

In the 20th century the concept of authenticity re-emerged. Until then, as Petzet (1995, 92) confirms, preservation concentrated entirely on the historic fabric. The Venice Charter stressed the importance of authenticity, without determining the notion. But, recent considerations questioned the belief that only the original fabric has a particular power. In nominating sites to the World Heritage List, according to the World Heritage Convention (UNESCO 1972b), authenticity covers the aesthetic and historical aspects of sites, and their physical and social context (Jokilehto 1999, 298). References for authenticity assessment were introduced in the Nara Document on Authenticity, such as ‘form and design, materials and substance, use and function, traditions and techniques, location and setting, and spirit and feeling’. However, it is stressed that authenticity should be appreciated as relative to the identification of values, ‘judged within the cultural context to which they belong’ (ICOMOS 1994).

The Nara meeting did not definitely resolve authenticity but it acknowledged that in order to establish a univocal meaning of the concept, it should be disconnected from its original meaning and history in the Western culture (Choay 1995, 297; McBryde 1997, 97). As Lowenthal notes ‘against a popular perception of authenticity as fixed and unchanging, its actual flux of change needs to be systematically outlined and sympathetically assessed’ (1995, 134). Repeated renewal is the only guarantee for survival of certain cultures (Petzet 1995, 94) and it is not seen as affecting significance. For instance, the wooden Japanese temples or the earthen African buildings need regular renewal to stop decay and disintegration (Pye 2001, 66).

Respect for authenticity becomes a principal aim of conservation. Nowadays, authenticity attaches to faithfulness to original objects and materials, contexts, or aims, which is considered ultimately unattainable (Lowenthal 1992, 186). Lately, a preference for original materials and workmanship is advocated, as it is regarded ‘to
preserve the appearance and historic integrity of buildings and ensure the work has an appropriate life’ (Drury 1994, 200).

Modern aesthetics are frequently discussed with regard to authenticity (Feilden 1994, 12). It should be taken into consideration, though, that the criteria, by which authenticity and aesthetics are judged and valued, change over time, from place to place, and from culture to culture. Additionally, the signs of ageing and wear should be consciously respected. Patina is highly esteemed as part of the identity of the object and its significance lies in being a symbol of age and genuineness (Van De Wetering 1996, 419). Cleaning processes should not destroy it and it should not be produced artificially (Feilden 1994, 21).

2.3.6 Reconstruction in situ or off site

The Charter for the Protection and Management of Archaeological Heritage declares that ‘reconstructions should not be built immediately on archaeological remains’ (ICOMOS 1990). The reason is the damage of archaeological resources by extensive interventions and the visitor impact (Blockley 1999, 17). Contrastingly, reconstruction in situ is favoured for placing buildings in their original setting and highlighting the sense of place, while safeguarding the aesthetic integrity of monuments and reinforcing national and cultural identities of peoples (Lowenthal 1985, 286-288; Schadla-Hall 1999, 105). Context is regarded influential in establishing and enhancing significance and authenticity too (Pye 2001, 72-73).

2.3.7 Reasons for intervention:
interpretation, education, tourism, identities, public

Interpretation and education, experiment and research, tourism development, local and cultural identities explain the increasing number of interventions in monuments. They are interwoven, achieving similar objectives and, often, being misused in similar ways.

Interpretation is interrelated with the need for preservation and the necessity to make visitor experiences meaningful (Sivan 1997, 51-52). Education, connected with the improvement of legibility and interpretation, becomes fundamental in heritage conservation and presentation, due to the emphasis on making the past interesting
and accessible (Bower 1995, 34-38). Ideally, improvement of legibility aids interpretation, which in turn facilitates education for both visitors and experts.

Interpretation and education represent long-term investments, as they improve the quality of visitor experiences, create greater sense of place and ownership of heritage for communities, and raise awareness and understanding of heritage values for managers (Hall and McArthur 1998, 168; Timothy and Boyd 2003, 204). This is interestingly reflected in Tilden’s dictum: ‘through interpretation, understanding; through understanding, appreciation; through appreciation, protection’ (in Uzzell 1998, 12).

In this regard, reconstruction is preferred for fulfilling interpretation and education objectives, as it transforms ruins into comprehensible structures, when is carefully planned and does not damage archaeological resources (Jameson and Hunt 1999, 60; Schmidt 1999, 65). However, interpretation does not always correctly enhance heritage awareness, understanding, and appreciation (Uzzell 1998, 11). The greatest debate is based on the existence of ‘the thinnest of dividing lines between effective interpretation and the creation of archaeological Disneylands’ (Cleere 1989, 14). Certainly, in an effort to achieve interpretation for the public, heritage experts occasionally overdo it. Interventions often result in transforming the character of the site and its monuments. Instead of enhancing interpretation, the site is converted into a theme park where objectivity may lack and the ultimate aim develops into the entertainment, rather than education, of visitors.

This is the reason why interest in the objectivity of interpretation questions the responsibility of archaeologists towards archaeology and the public (Stanley-Price 2003, 284). As Sivan maintains (1997, 52), political struggles, cultural fashions, technological skills, artistic expressions, religious beliefs, and other aspects of human behaviour should be brought forth by interpretation. As the existence of different interpretations of the past is acknowledged (Pye 2001, 11), archaeologists and historians, interpreters and educators should co-ordinate their work and communicate these different interpretations to the public (Kuttruff 2003, 278; Stone and Planel 1999, 2). Thus, interpretation aims should be clearly established, regularly reviewed, and combined with changing and varied presentations (Feilden and Jokilehto 1998, 53).
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100; Kuttruff 2003, 278). These prerequisites are acknowledged as essential by heritage specialists. However, in practice, there is still a long way to go, as other factors may influence decisions, for instance issues of political legitimisation and tourism. A significant example of progress in this regard has been made by ICOMOS, which has drafted the *ENAME Charter for the Interpretation of Cultural Heritage Sites* (2005). Its aim is ‘to define the basic objectives and principles of site interpretation in relation to authenticity, intellectual integrity, social responsibility, and respect for cultural significance and context’ (ICOMOS 2005).

On the other hand, in experimental archaeology, reconstruction is employed to test archaeological theories (Schmidt 1997, 47). Use of experimental archaeology for researching, understanding, and presenting the past, as well as for educating the public, is regarded ‘an effective interpretation approach and an important aspect of educational site visits’ (Killebrew and Lehmann 1999, 5-6; Stone and Planel 1999, 7). Models are constructed, based on surviving evidence, and they are tested in multiple ways, placing greater reliability upon them. The values of experimental structures are education and their public appeal, which, in turn, bring appreciation and support for further work (Coles 1979, 33-36). Such an example is provided by the Lemba Experimental Village in Cyprus, which incorporates a full-scale construction of a Chalcolithic village next to its actual remains, with the final goal of testing and defining aspects of prehistoric construction and processes of site formation (Gordon 1999, 110-120).

Hence, interpretation, education, and improvement of legibility are all interrelated and interdependent. Their influence on interventions is acknowledged by most heritage experts. However, in practice, this influence can be immense, contradicting the latest restoration theories and trends of minimum intervention.

National and cultural identities are major driving forces in interventions. As Byrne (1991, 275) confirms, archaeological heritage helps to develop the awareness of the population of a shared historical identity, either in geographical or cultural terms. Political legitimisation has been the case in many sites, because ‘politics and ideologies are closely interwoven with interpretation’ (Killebrew and Lehmann 1999, 4). In this way, national, local and cultural identities are *invented* or strengthened.
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For example, the reconstruction of the Minoan palace in Knossos in Crete is a source of national (Greek) and local (Cretan) pride (Papadopoulos 1997, 99).

However, the issue of identity is often abused to serve political or other goals. Preservation and presentation of the Great Zimbabwe monument reflect biases, as its interpretation addresses foreign visitors only. The nationalistic politics of the 1960’s and 1970’s saw the site as a political symbol and changed the name of the country after the site, becoming the only country in the world named after an ancient monument (Ndoro 1994, 621). Deliberate reconstructions have happened frequently. In reconstructing ancient Babylon in Iraq, only the ruler power, rather than the qualities of learning and wisdom of the ancient Mesopotamian civilization, has intentionally been displayed (Blockley 1999, 18). As Jokilehto observes, ‘the concept of national monuments is often loaded with political values which can provoke reconstruction of desired features of monuments and elimination or destruction of others contrary to political goals’ (1999, 308). Besides, in multi-cultural societies it is common for the dominant group to project its own heritage (Byrne 1991, 275). For instance, Qasrin, a Byzantine-period Jewish village in the Golan Heights was excavated in the 1970’s-1980’s to demonstrate the ancient Jewish presence in the area (Killebrew and Lehmann 1999, 2).

Hence, identities are quite dominant in heritage management and conservation decisions. Although the importance of a shared identity for a community should be acknowledged and respected by professionals, the issue seems to be a sensitive one, as it can be easily abused for nationalistic and political reasons. Consequently, it is essential to underline that objective consideration of the aims of interventions should precede any decision.

The economic potential of natural and cultural sites is often realised through tourism (de la Torre and Mac Lean 1997, 10-11). Cultural tourism and economic development provide jobs, modernisation, and opportunities to learn about history and archaeology. Often, preservation and development depend on the ability of the site to attract the public and generate funds (Killebrew and Lehmann 1999, 4; McNulty 1985, 34-36).
However, archaeological ruins are frequently subject to the conflicting demands of conservation and tourism, while lack of communication between the tourism industry and the heritage sector complicates decisions (de la Torre and Mac Lean 1997, 10-11; Timothy and Boyd 2003, 133). This destructive potential of tourism originates from demands for leisure entertainment (Herrmann 1989, 31). As Fowler indicates, there is a fine line between informing people and ‘aggressively marketing heritage attractions’ (1992, 122). Moreover, unrestricted tourist activity damages the archaeological record and inhibits the heritage experience (Hall and McArthur 1998, 87; Herrmann 1989, 31). This is frequently noted in the Mediterranean. In Knossos, Crete, the arrival of large groups of visitors has placed pressure on the original fabric of the monument (Papadopoulos 1997, 113). So, on the one side is the intent to popularise a site (Killebrew and Lehmann 1999, 4) and, on the other, the danger of the erosion of the resource (Blockley 1999, 18).

To keep a balance is difficult but, as Herrmann underlines, heritage managers can safeguard archaeological sites and avoid ‘extensive reconstructions and sensational presentations’ (1989, 31). Compromise must be reached between the conflicting objectives of preservation and use, as well as between maintaining the integrity and aesthetic appeal of heritage whilst encouraging visitors and making profits (Carter and Grimwade 1996, 45-46; Johnson 1985, 13; Shackley 1999, 70). This is the aim of the Charter on Cultural Tourism (ICOMOS 1999), which recognises the dynamic interaction between tourism and cultural heritage. It outlines basic principles to be followed by heritage management and by the tourist industry, so as to communicate the significance of heritage and the need for its conservation to the host community and the visitors.

The issues discussed above strongly influence conservation and management decisions, being closely linked with each other. For example, education and interpretation are addressed to the public, hence both local people and tourists. Concerning locals, the compelling influence of identities becomes crucial. These aspects also affect the nature and extent of the undertaken interventions. Although they are acknowledged by professionals as influential, there does not seem to be much insight into the actual role of these issues and the degree to which they influence or govern decisions.
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2.3.8 Indigenous peoples and world heritage

Herrmann (1989, 30) confirms that archaeological research and site management problems vary between world regions, and between eras in cultural history. A major aspect of management has become the heritage ownership, which is acknowledged to have moral, cultural, legal and material dimensions (Creamer 2003, 137; Hall and McArthur 1998, 41-42). Heritage authorities are increasingly concerned with ways of expanding concepts and practices for accommodating the heritage of multicultural societies (Pearson and Sullivan 1999, 312).

Consequently, much weight is now placed on indigenous peoples and their heritage, particularly how this heritage can be preserved and managed. Previously, neglect of indigenous peoples dominated practices. Their voices about heritage protection are only recently heard, as their movements have strengthened in Australia, Canada, New Zealand, and the United States. This led to an interest for ensuring that cultural heritage is controlled by those whose heritage it is (Hall and McArthur 1998, 41-42). Still, much needs to be done, because, as Creamer (2003, 130) confirms, Aboriginals' views are seldom induced in site management.

In the effort to comprehend the vital differences between indigenous and western approaches to heritage management and conservation, Byrne notices 'a lack of fit' (1991, 273), while Kreps (2003, 8) upholds that western models and practices are ineffective in non-western cultural contexts. An integrated approach in co-operating with ethnic communities, recognising the heritage of different cultural groups, and assisting them to celebrate it is sought (Pearson and Sullivan 1999, 313). These realisations are a significant step forward, but understanding indigenous perceptions and systematic efforts within management are required so as to safeguard aboriginal heritage effectively and in accordance with their ideas of protection and preservation.

The Athens Charter initially introduced the idea of a common world heritage (Demas 1997b, 151). Nowadays, changes in the meaning of universal reflect the notion that each product is a creative and unique expression of a particular artist or community, and represents the relevant cultural context (Jokilehto 1999, 295). They also reveal the idea that all people share an interest in heritage, in both national and international
levels (Byrne 1991, 273-274). These ideas of universal significance of heritage have developed since the *World Heritage Convention for Protection of the World Cultural and Natural Heritage* (UNESCO 1972b). The convention is concerned with identification, protection, conservation, and presentation of the natural and cultural heritage of the world that is of *outstanding universal value*, while being interpreted as genuine contribution of the culture it represents. It, thus, entails development of universal policies for protection of past achievements (Byrne 1991, 273-274; Drost 1996, 480; Jokilehto 1996, 55-56; Wheatley 1997, 4). Inscription of monuments on the World Heritage List ensures international recognition and provides international and national support and funding (Federspiel 1999, 166-171; Wheatley 1997, 5).

Therefore, ideas of universal value and policies in safeguarding world heritage have developed. Yet, there is still a long way to go before implementing integrated policies that respect the differences of cultures and facilitate nations which have difficulties in providing for their heritage. Concerns regard the imperialistic aspects of the world heritage concept and an emergent universal heritage deriving mainly from the West (Byrne 1991, 274-276), reflected in the geographical and thematic disproportions of the List (ICOMOS 1997).

### 2.3.9 Ideas about sense of place and identities and their impact on conservation and restoration programs

The concept of heritage has been further expanded from ‘historic building and its environment’ to ‘historic site’, and from ‘monument’ to ‘cultural property’ (Erder 1986, 191). Heritage does not only incorporate the ‘representative’, the ‘best’, the ‘ordinary’, the ‘monumental’ (Stovel 1995, xxiv), while the *Burra Charter* (Australia ICOMOS 1999) endorsed the concept of ‘place’, instead of ‘monument’ or ‘site’.

In this regard, conservation and restoration are now directed towards buildings and places, which may not have architectural or artistic value, but contribute to a sense of place, giving way to local cultures (Johnson 1985, 12). Hence, ideas about sense of place and identity of peoples have emerged. As Walsh (1992, 90-114) notices, the idea of the nation is articulated through ideas of continuity and tradition.
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The question of values has become vital in modern conservation, especially the recognition of cultural diversity and relativity of values, including their social character (Brimblecombe et al. 1997, 390; Jokilehto 1999, 18 and 292). The scope of conservation has broadened to include the community. These new perspectives require reconsideration of the central ethical questions of conservation: why, how and for whom heritage is preserved (Federspiel 1999, 171).

2.3.10 Value-based management, significance-assessment, and inclusion of stakeholders

Kristiansen (1989, 28-29) asserts that heritage management has become fundamental for the future direction of archaeology, because it bridges political, social and archaeological environments, and controls decisions and money. However, it is widely acknowledged that it requires policies, based on information and defined priorities (Fowler 1992, 81-82).

On the other hand, it has been suggested that 'there is no perfect system of heritage management', because it adapts to changes in the economic, political, social, and physical environment (Hall and McArthur 1998, 220). Problems occur due to wider societal, philosophical, and ethical issues (Fowler 1992, 94). In this regard, questions of heritage ownership and of the interests and values of stakeholders underlie what is done. Thus, it should be understood that heritage exists because of the values people attach to it and belongs to the societies that value it (Hall and McArthur 1998, 220; Pearson and Sullivan 1999, 33). This is the reason why interpretation and preservation lately place heritage in its historical and cultural context (Carter and Grimwade 1996, 53).

Given the above, values have been prioritised in the process of management and conservation decision-making. They set priorities in deciding interventions and establishing their extent and nature (Feilden 1994, 6; Stanley Price 2003, 285). Ascribing values and assessing the cultural significance of heritage is the approach set out in the Burra Charter (Demas 1997b, 153; Marquis-Kyle and Walker 1992, 21; Levin 1992, 4-7; Truscott and Young 2000, 102) and adopted by the Getty Conservation Institute too, for assessing the cultural significance of places. Respect for cultural and heritage diversity and the different perceptions of values and
conceptions of 'appropriate' treatments in different cultural settings and heritage contexts, through the *Nara Document on Authenticity* (Stovel 1995, xxxv-xxxvi), gradually emerged. It is maintained that conservation only makes sense if we understand why a place is worthy of conservation, and 'what distinguishes what might be conserved from what will not is value or significance' (Clark 2001, 12).

Yet, questions of identity, meaning and values indicate the probability of conflicting notions of ownership attached to heritage and, therefore, conflicting sets of values and interests (Hall and McArthur 1998, 4). Often value priorities are decided upon the interests of particular groups (archaeologists, national authorities, tourism operators) and refute legitimate values of other groups (Feilden and Jokilehto 1998, 18; de la Torre and Mac Lean 1997, 12; Pearson and Sullivan 1999, 17-20). This is why, identification, understanding of and constructive work on values is endorsed to ensure that heritage ownership is a rich experience and preserve heritage for the future (Hall and McArthur 1998, 220; Stanley Prince 2003, 286).

In this sense, it is now broadly accepted that determination of values must be made in consultation with all stakeholders, and 'reflect a long-term view of the site' (de la Torre and Mac Lean 1997, 12). Thus, the concept of stakeholders (individuals, groups, and organisations interested in heritage) becomes important. Communication with them and their associated values leads to their involvement so as to satisfy their needs and interests. It can be empowering for heritage managers, as opportunities are provided for new ways of actions. Additionally, communities supply political support by endorsing heritage management, as their confidence in systems increases (Hall and McArthur 1998, 41-55 and 221).

However, exclusion of local people from management processes is common worldwide. Only recently the situation has begun to change (Timothy and Boyd 2003, 276), probably due to the understanding that the more the public participates in these processes, the more the site becomes intelligible to them, and the more likely is to be preserved (Stanley Price 2003, 288). Thus, values and stakeholders have developed into fundamental notions in the process of management and conservation. This approach can advance further, since the implementation of these notions is still in its initial stage. Ways of applying them can evolve. Nevertheless, unless the
significance of these concepts is fully understood by heritage managers and those involved in the field, efficient conservation and management decisions cannot be made for preserving heritage, both as scientific record and as cultural resource.

2.3.11 Economics and heritage conservation

A considerable aspect of conservation and management is the role of economics in decision-making and implementation. This realisation has led to investigation of approaches for assessing the economic and cultural values of heritage and the way in which they interrelate.

Economics are connected to conservation by influencing decisions, shaping policies, encouraging, or not, heritage use, enabling conservation work through financing, and motivating stewardship (Mason 1999, 4). The economic agenda dominates heritage, since governments can easily withdraw from financing culture, and because jobs, income, wealth, and taxes can be generated by preservation and conservation (Bluestone et al. 1999, 19-20). Hence, economics and heritage conservation are strongly linked, influencing approaches. Possible contradictions between these two fields could prove detrimental for heritage.

Debates on economics and conservation emerge because, from the economic point of view, scarcity of resources, the public nature of cultural heritage, and the incentives of those who administer and those who enjoy heritage are important, while from the cultural viewpoint, only values and culture matter (Klamer and Zuidhof 1999, 23-24). Moreover, economics cannot provide for heritage values, such as 'historical meaning, symbolic and spiritual values, political functions, aesthetic qualities and the ability of heritage to form the identity of communities' (Mason 1999, 2).

In this regard, Throsby (1999, 19) suggests that heritage should be conceived as cultural capital because heritage exploitation is not sustainable in the long term. Multidisciplinary frameworks and tools should be devised to assess values, while mutual understanding between cultural and economic concerns is essential (Mason 1999, 2-4). Yet, economics are considered to have assisted in applying the notion of sustainability in heritage conservation, in terms of the values of current and future generations (Bluestone in Bluestone et al. 1999, 21).
Accordingly, the suggestions by the professionals focus on the conservation field’s finding ‘ways of engaging the power and influence of the economists’ work and business thinking’ (Mason 1999, 6). In this way, the cultural and the economic discourses may discover ways of relating, joining and balancing approaches and ideas into policies for effective heritage protection and preservation.

2.3.12 Ideas of holistic site management

Ideas about holistic approaches in heritage management dominate theories and practices. Obviously, the concept of holistic management is still evolving and will keep advancing, enriched with new ideas. A fundamental aspect of this approach is the inclusion of multiple meanings in the concept of heritage (Feilden and Jokilehto 1998, 11), as it has been discussed above. Thus, the starting point becomes the incorporation of all types of heritage into management practices and processes.

The main aims of holistic management have been succinctly articulated by Cleere as ‘an ideological basis in establishing identity, linked with its educational function, an economic basis in tourism, and an academic function in safeguarding the heritage database’ (1989, 10). Yet, it is widely argued that the principal objective of management should be to preserve the cultural significance of the site, as determined by the values society perceives in it (Pearson and Sullivan 1999, 82 and 126; Sullivan 1997, 15). In this regard, the community that values and owns the heritage resource becomes central to management decisions (Hall and McArthur 1998, 57).

Hence, effective management evolves in four steps, according to Pearson and Sullivan (1999, 8-9): location, identification and documentation of resources; assessment of values or significance of places to communities; planning and decision-making aimed at preserving significance; and implementation of decisions. Strategies to be employed should attend to visitor management, physical protection, condition monitoring, maintenance, and ongoing evaluation (de la Torre and Mac Lean 1997, 13). Sullivan (1997, 17) further stresses the importance of assessing management policies. Accordingly, efficient approaches need to be planned, with consideration of a holistic perspective of heritage and the ways in which it should be
safeguarded. Constant assessment of strategies provides a better insight of how to manage heritage in harmony with the perceptions of all stakeholders.

Although it is stressed that stakeholders should articulate values perceived in the site and define their wishes in terms of management (de la Torre and Mac Lean 1997, 13), in practice emphasis is placed only on sharing information, whereas participation in decision-making is practically refuted (Hall and McArthur 1998, 58). Thus, further work should be done so as to move from theory to effective practice.

Further to that, visitor management is crucial too (Hall and McArthur 1998, 107; Timothy and Boyd 2003, 157; Shackley 1999, 80), as it maximises the visitors appreciation and enjoyment of heritage and minimises the risk of damage (Pearson and Sullivan 1999, 277). Well thought-out tourism can contribute to changing attitudes (Perier-D'Ieteren 1998, 13). This is why, Feilden (1993, 59-60) suggests codes of practice to guide tourism development and ensure co-ordinated efforts. Proposals include the employment of techniques, so that visitor numbers neither detract from enjoyment of sites nor prevent their appreciation or cause physical harm, management costs are reduced, while political support for conservation, foreign currency, jobs, and income is generated (Feilden and Jokilehto 1998, 7 and 100). On the other hand, educating and raising people's awareness of the physical and socio-cultural environment are fundamental to achieving sustainable development (Drost 1996, 482). This is why the notion of sustainable tourism development is linked to heritage management (Timothy and Boyd 2003, 132). Sustainable approaches 'seek to retain full range of options for future choices, and not diminish long-term cultural assets by making them instantly and easily intelligible' (Baker 1999, 2).

In addition, marketing has recently become part of heritage management but should be utilised as a tool integrated into the broader planning process in order to mutually benefit sites and visitors. Stages important in the process are: identification of visitors and how the site meets their needs; setting objectives and strategies; activities that allow heritage attractions to compete for selected target markets and reach these targets; evaluation that involves collecting information and developing insights to improve the quality of decision-making (Hall and McArthur 1998, 139-
The importance of marketing is, hence, identified through its ability to attract visitors but also include all stakeholders, assess the end result, and find ways to improve practices and strategies.

Accordingly, physical conservation and restoration are also of principal importance (Hall and McArthur 1998, 8). Yet, policies should be developed in awareness of conservation philosophies and technical measures (Stanley Price 1989, 292).

2.4 Concluding remarks
As heritage management develops fast, people able to deal intelligently and sympathetically with the above-mentioned issues are needed (Fowler 1992, 106-107). Fundamental changes of ideas and perceptions of heritage and its management and preservation have emerged and challenged practices. As Jokilehto observes, ‘the question of heritage management has become one of the key issues in conservation’ (1999, 318). On the other hand, the debate on the propriety of the variety of interventions in archaeological remains is enriched by new concepts and attitudes. It is now the responsibility of the current and future generations of heritage specialists to continue, advancing approaches and critically examining situations.
CHAPTER 3: ANASTYLOSIS: CURRENT ISSUES

The previous charter has set out important issues related to the current context of cultural and archaeological heritage management. This chapter explains what these matters raise with regard to anastylosis and its future, focusing on aspects of terminology, theory and practice.

3.1 Terminology

Anastylosis (αναστήλωσις) is a Greek word, included in the architectural conservation vocabulary, initially in Greece and later in the rest of the world. In the 1st century AD, a long controversy between Iconolatry and Iconoclasm in the Orthodox Church ended (843 AD). Since then anastylosis was connected, as restoration of icons – 'αναστήλωσις τῶν εἰκόνων' – with the triumph of the restored Orthodoxy over Iconoclasm and had a special denotation for Byzantine art and history (Dimacopoulos 1985, 16).

In 1931 an international conference dealing with architectural conservation and its basic principles was held in Athens. Nikolaos Balanos, a Greek engineer who led the re-erection of the Acropolis of Athens from 1895 to 1940, described his working method as anastylosis, which he defined as the re-assembly of existing but dismembered parts of a monument, and contrasted it with reconstruction. The conference concluded in recommendations, The Athens Charter for the Restoration of Historic Monuments, which endorsed his concept of anastylosis (Demas 1997b, 151; Dimacopoulos 1985, 16;  

1 The worship of images as symbols, distinguished from idolatry – the worship of the images themselves (Brainy Dictionary 2004).

2 Iconoclasm, literally "icon-destruction," was a theological debate involving both the Byzantine church and state. The controversy spanned during the years 726–787 and 815–843. Imperial legislation barred the production and use of figural images and the cross was promoted as the most acceptable decorative form for churches. Archaeological evidence suggests that in certain regions of Byzantium, existing icons were destroyed or plastered over (The Metropolitan Museum of Art 2000-2006).
Schmidt 1997, 43-44). In practice, Ross, Schaubert and Hansen, working in the Acropolis in 1835-1836, possibly offered the first working examples of the process, and their work probably influenced Balanos’s perception and conduct of restoration (Dimacopoulos 1985, 16).

Anastylosis has been variously defined in conservation documents as the re-instatement, re-assembly, or re-composition of original/existing but dismembered parts of a monument (ICOMOS 1931, ICOMOS 1964, Carta del Restauro Italiana 1931, ICOMOS New Zealand 1992) (Appendix C1). Michaelidis, Filintra and Christofidou (1987, 259) analysed the word and concluded in defining anastylosis as ‘the re-erection of a ruined structure from its original parts found dispersed in the surroundings of the monument’.

Feilden in his *Glossary of Building Terms* describes anastylosis as the ‘re-erection of fallen pieces of a ruin, in order to re-create the original as far as possible’ (1994, 415). Similarly, Plenderleith defines anastylosis as the ‘rebuilding of a fragmented monument from its elements’ (1968, 129). According to Sanpaolesi (1973, 210), ‘anastylosis is a word derived from ancient Greek, meaning to ‘place upright and column’. He claims that ‘ἀναστήλωσις derives from στίλος’, which he translates as column (Sanpaolesi 1973, 210; Dimacopoulos 1985, 27).

This definition is refuted by Dimacopoulos who analyses the term etymologically as ‘any upright piece of stone’ (Patricio and Van Balen 1993, 87-88). He insists that Sanpaolesi’s etymology is wrong since there is no στίλος in Greek, but only στύλος which means ‘post, column’. This explains the existence of y in the present forms of the word in the English, French and German transliterations. Since there is no y in the Italian alphabet, there could only be anastilosi in Italian language (Dimacopoulos 1985, 27).

Additionally, he argues that the word αναστήλωσις does not exist in Greek³, asserting that in Modern Greek exists only αναστήλωσις, a noun deriving from the verb αναστηλώ (αναστηλώνω in Modern Greek). The verb αναστηλώ is etymologically formed by the

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³ However, the word αναστήλωσις (together with the verb αναστολώ) does exist in Greek and it means ‘support in/with pillars, columns’ (Tegopoulos-Futrakis 1993 Greek Dictionary).
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The prefix *an-* that means ‘up, over’, and the verb *στηλέω* that comes from the noun *στήλη* (*stele*), which means ‘any upright piece of stone’. He continues that *anastylosis* (in English and German), *anastylose* (in French), and *anastilosi* (in Italian) should be replaced with *anastelosis*, *anastelose*, and *anastelosi* respectively. In this way, the correct spelling and etymology of the word will be re-instated and allotted with uniformity (Dimacopoulos 1985, 24-27). In the *Dictionary of Ancient Architectural Terms* (Orlandos and Travlos 1986), however, the verb *αναστήλω* (*anastylo*) is defined as to ‘raise, erect something as a monument’. *Αναστήλωσις* (*anastylosis*) means ‘the afresh rising of a fallen stele in its vertical position, even of the whole monument, or of other architectural or decorative members’.

Thus, variations in usage remain. Confusion emerges when concepts are used beyond their defined limits and problems are caused due to differences between languages and disciplines (Jokilehto 1999, 304-305). For some professionals this confusion can signify problems in practice (Dimacopoulos in HE 1986, 19).

The term *anastylosis* has also developed different uses in countries and regions. As Feilden remarks, ‘the word is probably scarcely known to more than a few Anglo-Saxon practitioners of conservation, while it is almost equivalent to conservation in the minds of some Latin experts’ (1994, 252). Both in Italy and Greece, the word implies archaeological restoration. According to Dimacopoulos, ‘a wrong and old-fashioned interpretation of anastylosis led to the re-erection of certain monuments in Italy… described by Ceschi as *restauro archeologico*’ (1985, 18-19).

In Greece, the term has acquired the meaning of both anastylosis and restoration, as the word *restoration* does not have a precise Greek counterpart. The plural term *anastyloseis* (*αναστήλωσις*) implies several degrees of intervention, such as preservation, consolidation, restoration, rehabilitation, and reconstruction (Dimacopoulos 1985, 19; in HE 1986, 17). Dimacopoulos suggests that Greek restorers and conservation architects should ‘reduce the multitude of meaning that traditionally attribute to *αναστήλωσις*, confine the use of the word only to what was accepted in the *Venice Charter* as anastylosis, and find or invent another word for restoration’ (1985, 19). Yet, recent
attempts to introduce the word *apokatastasi* (αποκατάσταση) for restoration were opposed by the power of tradition (Dimacopoulos 1985, 19; Michaelidis *et al.* 1987, 259).

The difference between anastylosis and reconstruction is that 'the former refers to the use of original members, while the latter results in a new construction using an extensive amount of new material' (Jokilehto 1995, 70-71). Schmidt confirms this idea by sustaining that: ‘a re-erection, when done strictly as anastylosis, differs visually from a reconstruction that introduces new materials’ (1997, 46). From another viewpoint, the difference between anastylosis and reconstruction is directed towards their differentiation of manner, degree and extent, while both interventions are considered as restoration methods (Mertens 1995, 113).

It seems, therefore, that professionals continue to use the term anastylosis in various ways (Appendix C2). This multitude of meanings and definitions ascribed to anastylosis has led to some confusion in the architectural conservation world.

### 3.2 Theoretical and Practical Aspects

#### 3.2.1 Anastylosis in relation to architectural conservation and heritage management

The concept and practice of anastylosis is closely related to architectural conservation and management. Its place within the international debate and legislation can also be explored through the international conservation charters (Appendix C3).

In the *Athens Charter* (ICOMOS 1931) Article IV is dedicated to restoration, while anastylosis appears in Article VI ‘The Technique of Conservation’. Accordingly, in the first half of the 20th century restoration was perceived as the conservation-intervention to monuments and anastylosis was the technique employed for such interventions.
In the *Venice Charter* (ICOMOS 1964) anastylosis is considered the treatment of ruins emerging from archaeological excavations. The charter calls for reconstruction to be ‘ruled out a priori’ (Article 15). Dimacopoulos (1985, 16-18) remarks that reconstruction and anastylosis are not connected in the *Venice Charter*, though they appear together in Article 15. According to him, the only established connection there is between a ruined monument and reconstruction or anastylosis, implying that the methods are perceived as ‘the two sides of the same coin’, with reconstruction being rejected. Similarly, Erder (1995, 29-30) confirms that, in the specific article, reconstruction was abandoned and anastylosis was projected as the most appropriate method of protecting ruins.

Currently, anastylosis and reconstruction are considered as different extents of intervention to monuments. For instance, according to Mertens (1995, 113), they are both included among four different options, the other two being the clearing and conservation of the site and its arrangement for visitors, and the display of examples of its architecture.

At the same time, anastylosis of ancient monuments, as applied in the Mediterranean region, is not considered to be guided efficiently by the international framework, and the *Venice Charter* in particular (see AA 1996). Establishment of commonly accepted intervention limits for classical monuments (Lavvas in AA 1996, 80; Kokkoliadis in AA 1996, 20), delineation of practical anastylosis rules (Petrakos in AA 1996, 4), and, even, a new charter dealing exclusively with anastylosis (Giraud in AA 1996, 73) are proposed.

On the other hand, preservation and presentation of monuments and sites are strongly connected in the theoretical and practical framework of safeguarding heritage. The *Charter for the Protection and Management of Archaeological Heritage* (ICOMOS 1990) states that the objective of management is preservation and conservation of monuments (Article 6), while presentation and interpretation of a monument or site can promote understanding of the origins and development of modern societies and of the need of its protection (Article 7).
Accordingly, anastylosis becomes a significant aspect of heritage management and planning, chosen as part of the presentation and conservation strategy of a site and its monuments, in relation or in contrast to other solutions, e.g. *in situ* conservation, storage, complete reconstruction.

**3.2.2 The decision to implement anastylosis**

Multiple issues are raised by the different motivations for undertaking any form of intervention at archaeological sites, including anastylosis. These issues relate to the extent and aims of the intervention, as well as the specific problems presented by the monument in question.

**3.2.2.1 Type of buildings**

Many professionals have suggested that anastylosis applies to monuments originally erected with regularly cut pieces of stone, connected to each other with little or no mortar, and with small metallic joints (Bouras in AA 1996, 26; Dimacopoulos 1985, 18). In this sense, the elements preserve their autonomy and constitute ‘existing but dismembered parts’ that can be integrated and re-positioned (Dimacopoulos 1985, 18). The dry masonry structure allows for restitution of the original shape (Hueber 2002; Philippot 1996c, 362). Every member can take up its original position (Bouras in AA 1996, 26; Dimacopoulos in HE 1986, 17; Karadedos and Lavvas 2000, 5; Mertens 1995, 115). Such architectural and structural characteristics appear in monuments of the Greco-Roman world, but are also present in other monuments worldwide, built from autonomous members.

**3.2.2.2 Surviving material**

The survival of original material forms a determinative factor (Hueber 2002; Mertens 1995, 115; Patricio and Van Balen 1993, 87). Elements lying on the ground for centuries may suffer from erosion (Hueber 2002; Philippot 1996c, 362), which complicates decisions on their use. If only the best-preserved elements are used, then the quantity of original material is often severely reduced (Dimacopoulos 1985, 18; in AA 1996, 45). Yet, anastylosis using distorted members may deprive a monument of its artistic interest (Bouras in AA 1996, 28), and brings into question the restoration of architectural
characteristics and form (Mertens 1995, 119). Generally, it is maintained that re-erection of original parts should depend upon configuration of the remains and their state, specifically, if they retain their original form (Frin 1966, 94; Starosta 1999, 83-84).

3.2.2.3 Archaeological and architectural knowledge and scale of interpretation/conjecture
Avoidance of conjecture is strongly advocated in the Venice Charter (Article 9), while archaeological and architectural research should precede the intervention. As it will be shown in the case studies, these prerequisites are closely followed.

In this regard, knowledge of the original location of dismembered parts is fundamental (Patricio 1996, 102; Patricio and Van Balen 1993, 88; Plenderleith 1968, 130). However, this becomes a requirement of an ideal anastylosis, as it is practically impossible to know where exactly in the monument each member was located, unless an earthquake destroyed the structure and all its elements fell, following their original location in the structure. As it will be shown in the case studies, efforts are made to re-assemble members in their original location, but if that is not feasible, then they are placed in equivalent locations.

3.2.2.4 Structural stability and conservation
Structural stability and conservation are urgent reasons for anastylosis, according to many practitioners (Dimacopoulos 1985, 18; Karadedos and Lavvas 2000, 6; Mertens 1995, 114). The re-assembled parts offer each other protection from weathering and pollution (Hueber 2002), although not all professionals agree with that (see Schmidt in Jokilehto 1995, 71). Destruction of monuments due to accidental or violent phenomena, i.e. earthquakes, is also determinative (Feilden 1994, 252; Patricio 1996, 102), as most members will possibly be present around the monument.

3.2.2.5 Aesthetics
For some professionals it is unclear whether cultural, aesthetic, or educational reasons justify anastylosis. However, they project them in relation to the aesthetic values of monuments and the elevation of structures (see Karadedos and Lavvas 2000, 6).
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An emerging issue relates to anastylosis being characterised as 'ruin architecture' by Schmidt in his discussion of the way archaeological sites are presented. Schmidt distinguishes between intellectual, natural and objective ruins. Natural ruins relate to ideas of 'picturesque' developed in the 18th century, and the adopted approach aims at the use of anastylosis. A destroyed monument, however, cannot be regained and the result of anastylosis becomes an artificial ruin, a new construction with old fragments (Schmidt in Jokilehto 1995, 70).

3.2.2.6 Academic research
Facilitation of archaeological and architectural studies of a monument (Hueber 2002) is considered a significant result, as well as reason for anastylosis. Evidently, in order to plan and implement anastylosis we should have extensive knowledge of the archaeology and architecture of the structure. Moreover, the research undertaken before performing anastylosis will increase our knowledge and understanding of the monument.

3.2.2.7 Identity
Heritage can play a role in enforcing national or cultural identities of nations, regions, and social groups (de la Torre and Mac Lean 1997, 5-6), making this factor determinative of the extent and aims of anastylosis.

Heritage can be an integral part of nation building, creating a sense of belonging to a place. Many nations 'used concepts of common roots and shared past adversities and achievements', and monuments can have symbolic meanings and serve as 'icons of an emergent state' (Herbert 1995, 13-14). For instance, anastylosis of the Parthenon in the Athenian Acropolis initiated when Greece emerged as independent state after the long-term Ottoman occupation; reinforcing the Greek national identity was essential for the re-born nation (Jokilehto 1999, 89; Mallouchou-Tufano 1998, 55).

Preservation of historic memory, related to the identity issue, is considered to be achieved through retention of the material of the monument, and, thus, becomes a reason for anastylosis (Dimacopoulos 1985, 18; Hueber 2002; Mertens 1995, 114).
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3.2.2.8 Interpretation and education

Making the volume of a building more easily visualised improves its legibility and makes it better understood by viewers (Schmidt 1997, 42; Sivan 1997, 52). Re-assembly of dispersed elements on the monument renders the structure more comprehensible, providing informative didactic treatment (Dimacopoulos 1985, 18; Hueber 2002; Mertens 1995, 114). Anastylosis, therefore, contributes to reinstating, preserving and transmitting the image of monuments (Doumas in AA 1996, 64), especially as 'meaningless heaps of stones do not give an instructive message to the beholder' (Feilden 1994, 10). With anastylosis, the form of the monument is reinstated and its shape is restored (Philippot 1996c, 361; Schmidt 1997, 45; Dimacopoulos 1985, 18; Starosta 1999, 87). Additionally, interpretation enables visitors understand archaeology, and, thus, 'can convert them from puzzled tourists into advocates for archaeological research and conservation' (de la Torre and MacLean 1997, 9).

For Giraud (in AA 1996, 71), reconstruction and extensive anastylosis are unrealistic for two reasons: because there is great danger of creating hybrid monuments and because the public, including the professionals, have been accustomed to experiencing monuments in fragmentary state. The latter is an interesting observation, since it is true that most monuments, at least in this part of the world, survive ruined and it becomes exceptionally difficult to understand their form or imagine what they might have looked like. Due to this reality, full reconstructions and restorations are not necessary. Indication of the form of the monument may suffice to enhance its understanding.

Educational values are strong in many anastylosis projects, because benefits deriving from a restored monument are appreciated by many groups (de la Torre and MacLean 1997, 9). It is argued by some, however, that education should be a result, not primary objective, of anastylosis (Dimacopoulos in AA 1996, 43). Others even assert that it is the public that must try to understand the monument (Mallouchou Tufano 1998, 112). Contrary arguments emphasise that non-experts should not be deprived of experiencing the monument because they do not have the ability to imagine it recomposed. Understanding its form attracts the interest of non-experts. But, if the public cannot
experience the monuments, they may be disdained socially and, thus, endangered (Lambrinoudakis in AA 1996, 76-77).

In this regard, the critical dispute between Greek professionals on ‘didactic anastylosis’, a concept promoted by the Committee for Conservation of the Acropolis Monuments (see Korres and Bouras 1983, 403-405 and 417-418) emerges. The concept projects the educational value of anastylosis as a feature that may or may not be included in the intervention. This is why the term is often refuted by Dimacopoulos (in AA 1996, 43), who argues that anastylosis and any architectural conservation and restoration include educational aspects, but these aspects should not be primary objectives; it depends on the individuals too. This statement holds a truth, but anastylosis is not undertaken only for conservation and preservation. As it will be indicated in the case studies, educational reasons influence its extent. Yet, I would tend to emphasise that education can be achieved with a combination of methods, such as anastylosis and small-scale models. This is exactly what Dontas (in AA 1996, 14) states when he underlines that educational aspects cannot be accomplished without full reconstructions or small-scale models.

Dontas (in AA 1996, 14) also adds that the educational aspect is offered as a social commodity. In this regard, educational values are closely related to social values and to informing the public about a culture that may be lost (in the case of the classical monuments) but whose monuments are still present in our lives and enhance our understanding of society.

3.2.2.9 Tourism and visitor management

Tourism is related to access, marketing, and interpretation of heritage sites (McManamon and Hatton 2000, 1-19). Most importantly, tourism entails various notions such as identity, improvement of legibility and education – encapsulated in interpretation –, accessibility, and creation of revenue. As such, tourism becomes a significant aspect of architectural conservation. However, as de la Torre and MacLean (1997, 11) point out, the lack of communication observed between the tourist industry and the heritage sector is aggravated by prioritising economic values. This is only one part of the argument. Firstly, tourism includes not only international visitors to the site
but also the national people and those who live close to the site. In all cases, generation of income is simply one aspect. On the other hand, the ultimate aim of conservation is to safeguard heritage for future generations. Thus, making heritage legible and understood by the wider public, as well as connecting it to the past history and identity of people, is a great incentive for heritage conservation and management.

In this regard, many professionals seem to agree that excavation, anastylosis, and use of monuments are often encouraged to satisfy the perceived needs of visitors (Demas 1997a, 147; Melucco-Vaccaro 1996a, 204; 1996c, 330). For presentation and interpretation purposes that aim at commercial benefits, ‘heritage may become creation or adaptation, rather than preservation of what actually exists’ (Herbert 1995, 12). Allowing tourism to set the agenda for what happens on a site has proved destructive for sites and monuments (Demas 1997a, 147). Hence, many professionals argue that attraction of visitors should not be the aim (see Schmidt 1997, 50). Yet, this is slightly contradictory in the sense that attraction of visitors does not necessarily mean attraction of revenue, but also appreciation and understanding of the restored heritage.

It is acknowledged that heritage professionals ideally should protect the scientific value of the archaeological record and achieve its presentation in a ‘visually stimulating and thought-provoking manner’, while ‘maintaining historical accuracy and respecting the integrity of ruins’ (Sivan 1997, 52). Fulfilment of these prerequisites necessitates careful consideration of the scale of intervention and of how we should preserve and present heritage as a matter of social responsibility and of providing access to the public versus the tensions placed upon the heritage resource.

3.2.2.10 The public
Currently, ideas about involvement of the public in conservation and management decision-making are dominant. They are reflected either in the international theory, as reflected by the *Burra Charter* (1999), which recognises the need to involve people in the process, or in the consultation of ‘indigenous’ peoples for deciding appropriate conservation treatments, such as the ICOMOS *New Zealand Charter for the Conservation of Places of Cultural Heritage Value* (1992). In anastylosis, education of
the public and increase of visitation to the site are emphasised. Thus, public consultation and provision of information becomes an emerging issue.

3.2.2.11 Landscape setting
A focal aspect of implementing anastylosis and, in turn, increasing the scale of the ruined monument regards the harmonious integration of the restored structure in the landscape (Plenderleith 1968, 130). As it will be indicated in the case studies, the impact of a restored monument in an archaeological site with remaining ruins creates strong contradictions. Many past examples of such actions are currently judged as inappropriate. Thus, modest solutions are the ultimate aim of conservation and preservation nowadays, as major antithesis between restored and un-restored monuments within a site is not considered successful. This is why Plenderleith (1968, 130) declares that extensive anastylosis is ‘an unpardonable error’ and Feilden (1994, 10) is concerned with its devaluing the message of a site.

3.2.2.12 Authenticity and integrity
For many professionals, integrity – meaning material wholeness or completeness (Jokilehto 1999, 298-299) – should be principle and goal of anastylosis (Plenderleith 1968, 129; Mertens 1995, 115).

Accordingly, the creation of ‘hybrid monuments’ (Giraud in AA, 1996, 71) becomes an essential question of conservation (Philippot 1996b, 270). This is why it is repeatedly emphasised that starting point is the notion of authenticity (see Lavvas in AA 1996, 79). In this sense, any intervention in a monument ‘can only refer to a knowledge of the lost object, and such a knowledge cannot be identified with the real object without faking’ (Philippot 1996c, 362). However, authenticity is a notion that becomes quite difficult, not only to define, but also to apply to anastylosis and any other intervention. If we take into account the straightforward connotations of authenticity, then the result will be a decision on leaving the monument as found and not intervene at all. If we decide on anastylosis, then other considerations and objectives will influence the choice, implementation, and extent of the intervention. Thus, flexibility in our definition and judgements of authenticity should precede. Additionally, some professionals agree with
the idea that the 'need for conservation of monuments as cultural commodities and their use as exhibits, make the intention of anastylosis ethical' (Bouras in AA 1996, 25).

Respect for material authenticity in anastylosis is strong. As Giraud maintains (in AA 1996, 71) experiencing monuments as works of art is achieved through recognition of the authenticity of material, 'since we cannot do much about the authenticity of their original form. La was (in AA 1996, 79) also declares that the essence is found in authenticity of material. Yet, he explains that preservation of historical memory depends primarily on preservation of authentic form. This comes into contradiction with Giraud's statement. The only way to relate authenticity of material and of form is that original material is the aspect closest to the original form.

Despite the above, professionals agree that respect for material authenticity should be shown through minimum interventions and easily distinguished integrations (Bouras in AA 1996, 28; Giraud in AA 1996, 71; Plenderleith 1968, 129). Authenticity can also be maintained with traditional skills and technologies, and preservation of the context (landscape and surrounding structures).

3.2.2.13 Minimum intervention

Generally, it is endorsed, though not strictly followed, that intervention should be kept to a minimum (Giraud in AA 1996, 72), and that the remains should be principal actors rather than used as stage design (Sivan 1997, 53).

Kokkoliadis (in AA 1996, 19-21) maintains that the determination of methods and limits in anastylosis upholds a philosophical speculation, according to which 'the accepted limits of anastylosis should be a matter of philosophical speculation and not technical, as methodology is'. This idea is interesting and offers some indications of how to approach issues on the extent of anastylosis. On the other hand, it would probably be best not to classify those issues in terms of them being purely technical or purely philosophical. As it will be shown in the following chapters, all aspects of anastylosis are so closely related that we could not exclude any point of view when discussing them.
Other approaches, concerned with classical architecture, have implications on the way we define and decide the extent of anastylosis. Specifically, they are based on the notion that the values of classical art and architecture are embodied in the notion of entity, which is never placed before the notion of parts (Dontas in AA 1996, 8). As sustained by Karouzos (in Dontas in AA 1996, 9), 'a classical part expresses values both individually and as part of the whole'. This is the reason why Dontas sustains that even when the initial function of the monument is lost, aesthetic and historical values are included in its smallest fragments (in AA 1996, 9). Therefore, preservation of the entity may not be absolutely necessary and an intervention that is minimum and simply indicates the form of the monument would suffice.

These ideas are closely related with Brandi's thinking regarding ruins and their restoration. According to him, a ruin is a number of fragments that have lost their original function and aesthetic qualities and cannot be restored, because it is impossible to recover their lost unity and only maintenance of the status quo of the ruin is possible (see Brandi 1963). This is why he declared (Brandi 1963) that the concept of unity must be defined for establishing the boundaries of restoration. Yet, he maintained that a work of art is a whole, but not just a geometrical total of its parts, rather all its elements together form the whole (Jokilehto 1999, 232).

3.2.2.14 Reversibility
Reversibility is projected for ensuring the possibility of future interventions, because 'every attempt at anastylosis is potentially wrong' (Feilden 1994, 252). Prerequisites for achieving reversibility are focused on independent members remaining undamaged and on the possibility of removing additions without causing any harm to the original elements (Bouras in AA 1996, 26).

3.2.2.15 New material
The reasons for introducing new materials to replace missing parts relates to preserving the original structural system and, consequently, to the sufficiency of the static system of the monument (Hueber 2002; Lavvas in AA 1996, 4; Mertens 1995, 120). It is usually
acknowledged that the use of new material should be minimal (Dimacopoulos 1985, 18; Dontas in AA 1996, 15).

Concerning completions and integrations with new material, diverse opinions are heard. For instance, Dontas (in AA 1996, 6) explains that various aspects should be taken into consideration with regard to their quantity and distribution in the surfaces of the building, their volume and shape when they are in contact with authentic members and fragments, as well as their material and colour. Hence, introduction of new material is not a simple issue, but needs painstaking thought and examination of its effects to the reassembled fragments and structural members. It is also agreed that additions with new material should be integrated, given that the original material, the archaeological and historical evidence, and the original design of the structure are respected.

Furthermore, integrations of new material are considered acceptable – though in a relatively small scale – because they contribute to preserving the monument and allow further anastylosis of original members (Lambrinoudakis in AA 1996, 75; Lavvas in Petrakos in AA 1996, 4). Yet, care should be shown in not carving original surfaces in order to introduce this new material (see Dimacopoulos in AA 1996, 55), as it happened in past projects. On the other hand, integrations are rejected as a means of didactic treatment (Dontas in AA 1996, 13), in other words, if their introduction is decided in order to improve the legibility and enhance the educational potential of the monument. Even though legibility and education are significant objectives in anastylosis, new material should not be added if it is not necessary. If, for instance, one part of the upper structure survives intact or it has been restored using mainly original material, then there might not be any need for restoring with new integrations all other similar parts of the monument. Didactic reasons alone are not considered justifiable arguments for introduction of new material. It is rather the combination of educational and structural reasons that matters most. This is why Dontas (in AA 1996, 15) insists that ‘a lot of thought and trials’ are required before such decisions.

Additionally, various principles have also been suggested with regard to new additions:
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1) They should always be recognisable (Carbonara in Melucco Vaccaro 1996a, 209; Schmidt 1997, 45)

2) They should remain in the background, without the unity of the whole being strongly intruded upon (Bouras in AA 1996, 28; Dontas in AA 1996, 15; Giraud in AA 1996, 72; Mertens 1995, 119). The continuity of form should be preferred compared to the direct and immediate visibility of the modern intervention (Hueber in Mertens 1995, 119), because powerful contrasts and aesthetic disruption will be caused by the aged surface of ancient members and the white protruding surfaces of new ones (Dimacopoulos in AA 1996, 56; Dontas in AA 1996, 14-15).

The principle of slight, yet harmonious, differentiation of new material from the original derives from the Venice Charter. However, questions regarding the differentiation of new and old material being obliterated with time (Mertens 1995, 119) are raised.

3.2.2.16 Materials and skills

Anastylosis projects, undertaken with unsound methods and techniques, can distort ruins and destroy their integrity as documents (Melluco-Vaccaro 1996b, 330; Schmidt 1997, 46). For example, the techniques and materials used in the 1930’s anastylosis of the Athenian Acropolis monuments were harmful, creating problems in the current restoration project (Feilden 1994, 252).

3.2.2.17 A way forward: values and significance

Monuments and places hold diverse values for different stakeholders. Significance is ascribed when ‘the place signifies or symbolises something larger and more important than merely the ruins of its architecture’ (de la Torre and Mac Lean 1997, 8). It may be ‘personal, local, regional, national or international; academic, economic or social’ (Clark 2001, 12). Values and significance cover both tangible and intangible meanings (Pye 2001, 58).

The assessment of values is seen as starting point in conservation and management decision-making. By assessing what values should be promoted, according to the needs
of the monuments and the people connected to them, decisions can be made about the manner and extent of the intervention. If the aim is to successfully restore a monument, significance and values should be clearly stated and understood. The idea of understanding the values and significance of monuments is succinctly articulated by Clark (2001, 12), who sustains that ‘unless we understand why a place is worthy of conservation... conservation makes little sense’. Specifically, respect for values and the cultural significance of sites and monuments are instigated by the Burra Charter.

3.3 Technical aspects

3.3.1 Structural support and weight distribution
Two diverse procedures for strengthening the supporting system have been employed, according to Starosta (1999, 83-90). In the early examples (1835-1930) a high proportion of original material was used, with the tendency towards constructions resembling the ancient supporting system. From the end of the 1930’s and up until the 1970’s, the static construction system was altered by inserting new supporting elements of reinforced concrete. Since the 1970’s, the approach tends to return to the original structural system. Attempts are made to achieve a distribution of weight as similar as possible to that of the original structure, although missing connections often necessitate the strengthening of links with new connection dowels.

3.3.2 Joining blocks
The joining of building blocks presents problems according to different materials, such as marble, limestone, or sandstone. The recent trend has been to use epoxy glue (after laboratory analysis of stone) to replace cement as a joining material for broken fragments. Stainless steel and fibreglass armatures have also been used (Mertens 1995, 119-120), while more recently titanium has been preferred.
3.3.3 Type of new material

When new materials are required, many professionals consider it essential to use materials similar to the original ones (Mertens 1995, 115), although it may be difficult to obtain them (Michaelidis et al. 1987, 260). New building elements can be worked in either natural or artificial stone. Natural stone has aesthetically satisfying results, but apart from the difficulty of procuring similar stone, this solution is often costly, lengthy to execute, and requires skilled masons. Artificial stone is fast and simple to work and it is considered to guarantee optimal adhesion of the old material to the new. However, it can be too homogeneous and lifeless – or even endanger the individuality of structural members (Bouras in AA 1996, 28). Moreover, it often has different expansion and porosity qualities from the natural one, and can present decay problems, especially when bonded with cement. Hence, the exact matching of materials, in terms of compatibility and similar qualities with the original ones, by means of laboratory tests is suggested (Mertens 1995, 120-121).

3.3.4 Multi-disciplinary teams

Architects have traditionally had the lead role in anastylosis projects, as they possess technical and theoretical knowledge (Michaelidis et al. 1987, 260). However, anastylosis ‘must be the work of a group of special expertise from many fields – archaeologists, architects, civil engineers, art historians, chemists, physicians, conservation specialists and others – whose opinion is important and respected’ (Doumas in AA 1996, 65). Additionally, while it is acknowledged that technical knowledge, scientific personnel, and skilled craftsmen are required, anastylosis professionals also need to be educated about architectural history, archaeological principles, and aesthetics (Dimacopoulos 1985, 18; Dontas in AA 1996, 6; Mertens 1995, 121; Michaelidis et al. 1987, 260).

3.3.5 Background research and project planning

Detailed study of the available data, including the study of original components, determination of their location, and exploration of construction techniques, is essential for effectively planning anastylosis (Patricio 1996, 102; Patricio and Van Balen 1995, 146). Plans should be prepared carefully and after meticulous studies on the architecture and structure, since mistakes may have destructive results.
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The knowledge and experience gained from restoration projects enhances scientific research and understanding. Thus, anastylosis should be regarded as integral part of architectural historiography, which in turn leads to understanding the original building (Mertens 1995, 115; Patricio and Van Balen 1993, 88). In this sense, anastylosis becomes the practical aspect of archaeology (Petrakos in AA 1996, 1).

3.3.6 Advances in information technology


3.3.7 Documentation

Thorough documentation, through archaeological and architectural studies, combined with detailed publication, is of extreme importance for underpinning project planning and documenting outcomes (Lavvas in Petrakos in AA 1996, 4; Plenderleith 1968, 130).

3.4 Concluding remarks

Anastylosis appears in a number of international conservation charters and is considered by many as a justifiable form of intervention in ruined monuments. However, there are numerous grey areas in terms of its definition, planning and implementation. Basic
etymological debates and variations in the use of the word imply subsequent differences in practice and highlight the importance of clearly defining anastylosis. Reasons and driving forces behind its implementation are inextricably linked with wider conservation decisions. Issues and principles, such as cultural significance and assessment of values, authenticity and reversibility, and preservation of the setting of the monument, are central to the implementation of anastylosis. Technical aspects of its implementation reflect scientific and technical developments in the field.
CHAPTER 4: CASE STUDIES FROM GREECE

Examination of the case studies from Greece (fig. 1) includes a brief description of each monument and its state of preservation, as well as a detailed presentation of the anastylosis programme. Discussion of the objectives of the restorers and the theoretical framework of the anastylosis follows, together with observations about issues arising from the undertaken works.

Further information and an extensive presentation of the history and the anastylosis of the monuments in question, including full bibliographical references, can be found in Appendix D. A glossary of architectural and archaeological terms is found in Appendix F. Photographs of the monuments and the anastylosis works are presented in Appendix A.

4.1 The Erechtheion and the Parthenon at the Acropolis of Athens

The monuments of the Acropolis of Athens (figs. 2-5) show many examples of anastylosis. This study focuses on the Erechtheion and the Parthenon. Their history (including their restoration history) is given in Appendix D1.

4.1.1 The Erechtheion

The Erechtheion (421-406 BC) is located to the north of the Acropolis and close to its surrounding wall (fig. 5). It stood on a platform and consisted of a rectangle cella, divided by walls into three sections (figs. 8, 9). The Caryatid porch was attached to the southwest corner of the structure (fig. 10).

From 1834, the monument underwent multiple excavations and restorations (fig. 11). By the 1970’s, it presented serious problems. Its members were shattered because of oxidation and expansion of metal joints; the roofs of the façades were ready to collapse; most elements were fragmented and others had been randomly repositioned; and surfaces, especially those of the Caryatids (fig. 12), had
deteriorated from atmospheric pollution. Anastylosis was undertaken between 1979 and 1987.

4.1.1.1 The anastylosis programme

The anastylosis study comprised research on historical phases and previous restorations, consultation of publications and archival material, analysis of architectural, static, and physicochemical problems, installation of the work-site (figs. 13, 14), and detailed recording of the works. The primary goal was the removal of the Caryatids (figs. 10, 12) to the Acropolis Museum to protect them from atmospheric pollution. They were replaced by copies of laboratory-tested cement, whose colour and texture matches those of the monument. Exact copies of original elements from the east porch (now in the British Museum) were placed in their respective positions (Bouras 1994a, 101-103; Casanaki and Mallouchou 1985, 80-92; Economakis 1994a, 11; Korres 1994c, 37; Mallouchou-Tufano 1994a, 13; Papanikolaou 1989, 2; 1994, 147; Touloupa 1985, 9).

Problems concerned the form, construction, and static sufficiency of the monument. The physico-chemical problems of corrosion and expansion of metal joints and the steel frame employed by Balanos, in 1902-1909, resulted in cracking of the marble and caused structural instability. Marble surfaces suffering from deterioration were stabilised. Interventions took place only in areas most affected structurally. When damages were not critical for the structural behaviour of the building and there were no indications of progressive deterioration, no action was taken. Skilled stonemasons cleared out clamps and mortar and cleaned out cuttings. As many members were placed in random locations during previous interventions, they had to be repositioned (fig. 17), permitting restoration of the subtle architectural refinements of the building. Computer programmes were employed for finding the correct locations of many members. Yet, it was not possible to avoid random assembly of some elements. Their restoration included use of white cement and hidden ties made of titanium rods, produced in laboratories. Ancient cuttings were re-used to position new joints. Completions were effected in Pentelic marble (figs. 18, 24), with pantographs. There was no sculpting of original material and only old traces were used. This method was preferred because, even though 20,000 fragments had been collected from the Acropolis plateau, few could actually be assigned with certainty to
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the Erechtheion, as techniques did not allow for a more accurate identification. Material foreign to the structure was removed and replaced by accurately sculpted elements (Bouras in CCAM 1977, 30-34; Casanaki and Mallouchou 1985, 81-82; Korres 1994c, 43; Papanikolaou 1989, 2-5; 1994, 137-143; Skoulikidis in CCAM 1977, 19-21; Touloupa 1985, 9; Zambas 1994a, 107-108).

The anastylosis programme was divided into five phases. These included restoration of the north, west, and south walls and of the Caryatid podium, as well as of the coffered slabs from the north porch roof and the corner of the east porch (figs. 15, 16, 20-23). Further small programmes will be undertaken, including the formulation of neutral flooring in the cella, after conservation of the lower parts of the side walls. The roof above the north porch will be restored using modern material, for rain protection. The sheltered courtyard to the north will be restored, while systematic conservation of the surfaces has been decided upon too (Bouras 2002, 16-17; Bouras and Zambas 2001, 25; Papanikolaou 1989, 2-6; 1994, 147).

4.1.1.2 Observations and discussion

4.1.1.2.1 Analysis of objectives, and whether or not they were met
The primary reason for intervening was the urgent need to amend and revert the devastating consequences of previous restorations and to tackle the effects of atmospheric pollution on marble surfaces (Papanikolaou 1989, 5; 1994, 137). Indeed, the consequences of the previous restoration were halted. Damaging material was removed from the affected parts. Members were dismantled, conserved, and then re-assembled in the correct order. The effects of atmospheric pollution on the surfaces were efficiently dealt with. The Caryatids were removed to the Acropolis museum and a series of conservation programmes were undertaken. Systematic conservation of marble surfaces was also decided. Yet, no further details were found regarding these programmes, apart from a publication (see CCAM 1994a) on the surface conservation of the Acropolis monuments.

A fundamental aim was to remove contradictions created by the previous anastylosis and to alter the image of the monument that had resulted from the unsystematic re-assembly of its members (Papanikolaou 1989, 5; 1994, 137). Yet, it has been
acknowledged by the restorers themselves that some members were randomly assembled, when there was no alternative. This raises the question of whether it is acceptable or not. In comparison with the past restoration, in which chance assembly of structural elements was the norm, in the recent intervention efforts were made to locate each member and re-integrate it in the correct position. It was only when no original location could be established that corresponding ones were chosen. However, this is in direct contrast to expectations of professionals, such as Mertens (1995, 115), that each structural member should take up its original position. This is a matter that relates to preserving the original structural system of the monument and its authenticity of form and design. On the other hand, whether elements are re-assembled in their original locations is not obvious to visitors. A close look during my visits to the monument could not reveal whether structural elements had been randomly assembled or not. Obviously, random assembly in the past had consequences for the image and form of the monument but that shows only if we compare before and after photographs. Careful examination of the monument and comparison with the limited amount of visual information on its previous state does not reveal much either. The only difference is noted on the north-east part of the wall, which was much lower in height than it is now.

The reason for choosing the Erechtheion first among the Acropolis monuments was that it presented the most urgent problems and was in greater need of stabilisation. It was also a convenient choice, due to its size, to make a quick start for rescue work and acquire essential experience for further restorations on the site (Casanaki and Mallouchou 1985, 80; Korres and Bouras 1983, 664; Touloupa 1985, 8). Indeed, according to the professionals involved, stabilisation was achieved. Experience for restoring the other Acropolis monuments (the Parthenon, the Propylaea, and the Temple of Athena Nike) was attained too, as it will be shown below (4.1.2).

The restorers also judged that by assembling ancient fragments in their original locations, the monument became more legible and was qualitatively elevated, while later historical interventions are accurately discerned (Papanikolaou 1989, 4-5; 1994, 147). Legibility has theoretically been achieved, since mistakes in the form and structure have been corrected. Yet, the monument after its previous anastylosis was already legible and the differences between then and now are not easily detected.
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Distinction of its later phases is not easily noted, though the Christian phase of the monument is observed on the floor, in the interior. The Roman phases or the part of the Balanos' anastylosis of 1902-1909 are not easily discerned either.

However, information on the historical phases of the monument is not available on site, apart from a notice board (fig. 26) with views and plans of the monument and a paragraph about its restoration. This brief information is provided in two languages, Greek and English. Unfortunately, this raises questions of whether this is enough information for the interested public. There are no indications on the past history of the Erechtheion and no further information promotes knowledge of the monument and its history, even though the recent anastylosis aimed at enhancing its understanding.

In general, though, the objectives of the restorers seem to have been met.

4.1.1.2.2 Theoretical framework of the anastylosis works
The restorers followed the theoretical framework of the Venice Charter (1964). This is standard practice in anastylosis projects in Greece, ever since the establishment of the charter. It should also be noted that at the time of intervention (1979-1987), the charter was the ultimate representation of the international restoration theory.

The multidisciplinary approach adopted during the anastylosis is in accordance to Article 2 of the charter (Bouras in CCAM 1977, 27-29; Papanikolaou 1989, 2-6). It was reflected in the wide variety of collaborating disciplines, especially archaeologists, architects who research the history of the monument and decide on its form and architecture, conservators and chemical engineers who are involved with issues of conservation of structural members, and civil and structural engineers who resolve issues of stability of the building. These experts conducted studies essential for undertaking the project, tackling the presented problems, and clarifying issues about the best possible approach. Stonemasons undertook the task of creating replacements for missing parts and connecting original and/or new parts together. Further fields were represented by other specialists involved before, during, and after the intervention. Participants in the international meeting on the Erechtheion were anastylosis specialists and seismologists, who expressed their views and discussed
them analytically. Such abundance of opinions expresses recent trends, according to which multidisciplinary approaches guarantee dialogue and polyphony, as well as successful projects. This anastylosis was the first organised attempt by the Greek State after the Second World War with formal procedures, institution of working groups, and employment of scientists, archaeologists, and architects. It became the guide for similar approaches to the Acropolis and other monuments; nowadays there are five such committees in Greece.

The decision on the removal of the Caryatids to the Acropolis Museum, following Article 8 of the charter (Bouras in CCAM 1977, 27-29; Papanikolaou 1989, 2-6), initiated from respect for the sculptures, which had deteriorated quickly due to atmospheric pollution, and after taking into consideration other possible choices and that a consolidation method for the marble had not been found yet. Most experts agreed on the removal, judging that it indicated 'respect towards the valuable archaeological heritage' (Dontas in CCAM 1977, 16-17). This solution offered better protection for the sculptures. So, since the 1970's they have been kept in a protected and controlled environment, while the pollution in Athens has not improved much. Furthermore, their removal dictated their replacement by copies, according to the architect-restorer (Papanikolaou 1989, 6-7; 1994, 147), for reasons of structural stability and for maintaining the historical image of the monument. These arguments are considered reasonable since the role of the Caryatids was not only decorative but also structural – they were holding the roof of the southwest porch. The statue-like columns are a characteristic feature that makes this monument unique in its synthesis and architecture. Their removal would alter the image of the monument as it has survived over time.

On the other hand, non-valuable materials found in the structure were removed and others were preserved, such as parts of the Christian phase and the past restoration, following Article 11 of the charter (Bouras in CCAM 1977, 27-29; Papanikolaou 1989, 2-6). This has been discussed above (4.1.1.2.1).

Another issue concerned the contradiction that emerged from Article 9 of the charter, which endorses respect for the original material, and the restoration of surviving members for structural reasons. On the one hand, this was reflected in the careful
handling of members and the use of ancient and past connecting points for new joints, as well as the preservation of some of the historical phases of the monument. However, as the restorers clarify (Papanikolaou 1989, 2-6; Bouras in CCAM 1977, 27-29), non-intervention to original parts was impossible due to the re-incorporation of architectural members found scattered around the Erechtheion (fig. 25a). Additionally, some previously restored members had to be dismantled to extract the material of the past intervention and then stabilised using new material and put back. The contradiction is understandable but it should not limit decisions on re-incorporating original material to the monument, since this is the essence of anastylosis. As long as the principle of minimum intervention guides the undertaken works and excesses are avoided, then original material is respected.

According to the published information, both traditional and modern techniques were harmoniously combined, in accordance to Article 10 of the Venice Charter (Papanikolaou 1989, 2-6; Bouras in CCAM 1977, 27-29). Experiments in laboratories tested new materials that could be employed for completions and additions. The final decision was on Pentelic marble, the same as the original material of the temple. Stonemasons using traditional crafts were employed (fig. 18). Titanium, a metal that behaves similarly to iron but is much lighter and does not oxidise, was decided upon as the connecting material, after laboratory experimentation. Titanium is only lately employed in anastylosis. Further experiments supported the use of cement mortars for the Caryatids and other sculptural copies. Although there was some criticism regarding the quality of the cast copies that replaced the Caryatids, the material was tested to ensure its endurance of the high levels of pollution in the city and its compatibility with the marble. Additionally, the copies harmoniously integrate into the monument (fig. 10). Hence, both traditional methods and modern techniques were employed to achieve the desired result.

The requirement of the charter (Article 12) for harmonious but distinguishable differentiation between new and original parts was respected with the different texture of new members and the inscription of the anastylosis date on them (Papanikolaou 1989, 2-6; Bouras in CCAM 1977, 27-29). Dates are indeed inscribed on members. Close inspection of the restored monument, however, does not indicate
such a difference in the textures of new and surviving material. They rather seem quite similar (fig. 19). Maybe this visual harmony should be attributed to the use of Pentelic marble for both new and original parts. Nevertheless, chromatic difference between new and original members is more than obvious (fig. 27a), even though it is acknowledged that ‘time has already softened the chromatic difference’ (Touloupa in CCAM 1994b, 190).

It should be added that the new infill pieces in the interior do not harmonise with the ancient elements (fig. 27b). This is acknowledged by the restorer himself (Papanikolaou 1994, 147), who explains that the discrepancy is caused by certain technical problems. The interior of the temple presented alterations on the shapes of structural members due to two fires in historical times. The restorer chose not to replicate the thermal fragmentation of the members. Though it is difficult to judge this decision, it should certainly be recognised that it forms an approach with respect to the surviving form of monument and without aiming at mimicking every single detail. Considering the apparent chromatic difference too, it could have been performed in a less visually dramatic way, with the surfaces of new members resembling the surfaces of the original ones.

Concerning the requirement for publications, according to Article 16 of the charter (Bouras in CCAM 1977, 27-29; Papanikolaou 1989, 2-6), the committee states that they have provided analytical information on structural and architectural issues. However, more information regarding the monument before and after the intervention and the plan that was followed is needed. The committee simply focused on providing specialised information. The principal publication (CCAM 1976-1977) includes detailed description of the state of preservation of the Erechtheion and the proposed measures for its anastylosis, but it was not found in any library. The only accessible publication is a brief summary of the original (Papanikolaou 1989). The only other published account of the anastylosis is the Proceedings of an international meeting held with regard to the anastylosis of the Erechtheion. This publication (CCAM 1977) is interesting and covers issues of the intervention that were extensively debated. In general, the quality of publicised information is of good standards. However, the quantity is scanty as there is not much information on the
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plan of the site, the undertaken works, the interpretation of the theoretical framework of the intervention, the encountered difficulties, and the overall result.

A comment that needs to be made about all the Greek case studies, regards not only the occasional unavailability of published sources, but also the information being mainly in Greek – except for the Parthenon. Although this did not cause any trouble to me, as I am a native speaker, I should acknowledge the difficulty of accessing information in a language that not everybody would be familiar with. Thus, requirements for lingual accessibility and availability of the published accounts of anastylosis should be established.

Apart from the international framework followed, some further principles were adhered to (see Bouras in CCAM 1977, 29), deriving from the Greek experience in anastylosis of classical monuments. They were formulated by the architect and restorer Charalambos Bouras, president of CCAM and member of similar committees in Greece. These principles were initially applied in the anastylosis of the Stoa of Vravron in Attica that took place immediately after the establishment of the Venice Charter. During the Erechtheion anastylosis they were still in the initial stage of their formulation. In their later development they evolved into five indispensable principles respected in every anastylosis in Greece. They are notably followed in most interventions to monuments internationally, but the pioneering Greek approach is that it applied them in accordance to the needs of classical monuments.

Reversibility, which permits the relatively easy dismantling of restored parts to replace them with original material, was secured with minimum intervention on original members and detailed recording (Bouras in CCAM 1977, 29). This principle is often discussed with regard to its definition. In theory, it forms a prerequisite of conservation approaches, since it guarantees future interventions. In anastylosis it permits the possible incorporation of members that may be found later. This was the rationale behind the actions of the Erechtheion restorers. Reversibility was also crucial for ensuring the possibility of re-integrating the original Caryatids back to the monument in case the problem of pollution is resolved in the future. In practice, reversibility may raise issues, such as the possibility of dismantling structural or architectural elements in order to integrate newly discovered members. But what
type and amount of members would validate such action? The Caryatids certainly would, but it is quite possible that non-significant members would not justify dismantling the monument. Nevertheless, the essence of the principle is found in the theoretical possibility to reverse actions rather than its practical application.

Minimum alteration of the appearance of the monument is based on the familiarisation and knowledge of its form as preserved so far and as it appeals to collective sensitivity (Bouras in CCAM 1977, 29). It was indeed achieved (figs. 8, 11b), as the monument does not seem that much different compared to how it looked after the Balanos anastylosis. However, a certain contradiction between this principle and the aim of the restorers to alter the image of the monument as resulted from the random re-assembly of its members emerges. The restorers wished to correct the obvious mistakes of the past restoration, yet, they preserved some of these phases. They also wished to appeal to the collective memory of people who are familiar with the form of the structure as it had survived through time. The Acropolis monuments have been repeatedly restored in the 19th and 20th centuries. Their resulting form and image are related to the history, not only of the Acropolis, but of the Greek nation and of Europe too. In this regard, the universal historical significance of these monuments should not be neglected, but be equally respected. Similar is the case of the reconstructed, by Evans, palace of Knossos in Crete. Consequently, this principle should be observed in anastylosis projects undertaken in monuments previously restored. Compromise between minimum alteration of the appearance and corrections in the form of a structure should be strived at.

Anastylosis also aimed at increase of the didactic values of the Erechtheion, since visitors would be able to understand the building as fully and easily as possible (Bouras in CCAM 1977, 29). Certainly, its didactic values have been further clarified. But, as its image is not drastically altered, its didactic values are simply enhanced. However, its legibility is improved and the education provided is correct, in contrast to the results of the past anastylosis.

Concerning authenticity, the effort to remain faithful to the form and design of the monument was successful, since most members took up their structural role and historical phases were preserved. Given recent discussions on the notion, it would be
reasonable to assume that it is expressed in every aspect of the existence, construction, and restoration of a monument. In this regard, variables of the authenticity of the monument can be highlighted. For instance, authenticity of materials was respected by using natural stone from the same quarries used in antiquity. Authenticity in workmanship was reflected in employing well-trained stonemasons who utilised techniques similar to the ancient ones. Regarding location and setting, the monument was restored in situ, in its exact location, with provisions for the site itself and its surrounding monuments. However, authenticity is an abstract and relative concept that is expressed multilaterally. Thus, it becomes almost impossible to actually assess the final result of the anastylosis in this regard.

4.1.1.2.3 Issues arising from the project

The long history of the Erechtheion includes a traumatised period due to the Greek and Turkish conflict and a series of flawed interventions at the beginning of the 20th century. Those interventions altered the form and structural stability of the monument and their catastrophic consequences demanded urgent measures. Consequently, the theoretical and technical framework of the 1970’s anastylosis programme is better understood and explored.

Interestingly, the intervention was initially defined as stabilisation, due to the presented structural problems. It was clearly stated that there was less scope for restoration and anastylosis, since little ancient material could be found dispersed around the building (see Korres and Bouras 1983, 664). Yet, during the course of the works, the intervention was altered to reflect the actions of dismantling and re-assembling the randomly compiled members together with newly discovered ones (fig. 25a). Hence, the intervention was identified as anastylosis, which also comprised stabilisation of structural members, while conservation was undertaken to halt deterioration of marble surfaces due to atmospheric pollution. Obviously, no alternative treatments could have been chosen in this case.

The undertaken intervention was also described as ‘restoration of a restoration’ (Zambas 1994a, 107), highlighting the difference between intervening in a ruined monument and a monument previously restored. Many actions were similar to those undertaken to monuments emerging ruined from excavations. Such were the research
conducted before and during the intervention, the integration of original and new material, the efforts to utilise the appropriate material for integrations and connections, the joining of members, the techniques employed, the general theoretical framework, as well as some aims sought to be achieved – static stability, enhancement of values, and improvement of legibility. The only apparent difference is that the monument had to be dismantled; hence, the intervention was quite extensive. Although this raises speculations – some were expressed in the international conference (CCAM 1977, 16) – it is the only way to correct past mistakes and remove damaging material from the structure. Besides, when the damage was not judged serious, no action was taken, signifying respect for the material and history of the monument.

In this regard, given the aims sought to be achieved, it becomes apparent that both the theoretical and technical aspects in anastylosis are linked and determine the extent of the intervention, with the most important prerequisite being the respect for the original fabric and the monument itself.

Further comments should be made about the high numbers of surfaces of new marble. A closer look at the south wall (figs. 20, 22) reveals that the amount of new material is quite excessive. This forms a great problem of architectural conservation in general, as it affects the authenticity of the form, image and structure of the monument. The quantity of new material has been extensively discussed and debated in relation to minimum interventions and anastylosis (Chapters 3, 6), yet, no absolute conclusions are reached. The Erechtheion restorer acknowledges that great amounts of new marble have been used (see Papanikolaou 1994, 147). This is obvious but it was also essential for re-assembling many original members. Here is where realism should be exercised, as every intervention to a monument will affect its authenticity and form. It would be great if ancient monuments were found either intact or with all their members surviving. But this is not possible, and, thus, a degree of compromise should be accepted when judging the results of anastylosis.

Notably, the past restorations made the recent interventions quite difficult, as ancient members were displaced, distorted by chiselling, and damaged by insertion of metal, which corroded quickly and caused further damages (Papanikolaou 1989, 1-2; 1994,
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137). Past technologies proved harmful for the monument, though at the time of their application were appreciated and endorsed. This should always be taken into consideration by professionals when applying scientifically and technologically advanced methods. Yet, due to the technological advances themselves, materials can be tested to examine their future behaviour. The principle of reversibility was also established to guarantee that no further damage can be caused to the structure and that the building can return to its state prior to the intervention. Therefore, such actions should be thoroughly contemplated before implementation.

The general anastylosis strategy included extensive research before the intervention (archaeological, architectural, and structural studies on the history of the Erechtheion, its state of preservation, and its past alterations and restorations). It was based not only on physical evidence but on archival information too. Valuable information on the construction and architecture of the monument was gathered, which, in turn, led to well-informed decisions on the intervention. Hence, the importance of good quality documentation that assists in planning and implementing anastylosis should be highlighted.

Interestingly, the archaeological and architectural values of the monument were the main values taken into consideration by the committee when planning its anastylosis. Its exceptional architectural and sculptural features and its complex plan and form require preservation and elevation. However, more values should be contemplated when an intervention is decided and planned. The direction of the current restoration theories, especially through the Burra Charter and the Getty Conservation Institute approach, towards assessment of values should guide our anastylosis and restoration decisions. Obviously, the Erechtheion was restored many years ago, at a time when respect for the values was still developing and emphasis was paid to aesthetic and historic ones according to the Venice Charter.

The management plan for the site, though not found in any written form, includes care for the surroundings and for visitor accessibility, as well as maintenance works and future programmes on the monument. After completion of the works, visitors were given the possibility to approach the Erechtheion from its east and north sides, while another temporary path at the west made that side accessible too (fig. 25b).
Nowadays, visitors access all the sides and they can even ascend to the north porch. However, it is quite difficult to approach the Caryatids porch because of the dispersed members in front of it (fig. 20). The cella of the temple is not accessible, probably because the interior floor is not fully restored. A future plan includes the formulation of neutral flooring in the cella (Bouras 2002, 16-17), which would probably allow future visitor access. Additionally, the committee plans to restore all the ancient paths (see CCAM 1990, 6-7) around the building after restoration works on the Acropolis monuments are finished.

Restoration and anastylosis programmes are undertaken in the Parthenon, the temple of Athena Nike (fig. 6), the Propylaea (fig. 7), and some smaller monuments of the Acropolis (Fatouros in Economakis 1994, 186). Although the Erechtheion anastylosis took place long ago, it is understandable that a great site like the Acropolis requires a well-informed management plan, which will take years to implement. The management of the site seems to be devised as time goes by, rather than having been outlined in the beginning. Both options are significant, since decisions or modifications can take place depending on information acquired through time and according to the latest theories of heritage management.

Additionally, further works have been planned for the future, indicating that anastylosis does not necessarily stop after the basic works are completed. The plan for restoring the floor of the cella is quite extensive and will alter the image of the interior. It can be justified, though, if it is planned with a view to provide access to the public and protect the unearthed phases of the history of the monument. Similar is the speculation over the restoration of the roof of the north side that is planned for protecting the porch against the rain. Yet, the issue of restoring roofs is quite sensitive, as it will be shown in the Parthenon and in the Avaton of Epidauros. The incorporation of a structural part made of entirely new material, as the original material may be lacking, raises questions on the authentic form of the monument.

Maintenance work is also currently undertaken and involves conservation of the lower parts of the side walls and systematic conservation of marble surfaces. This is a significant action. Initially, it confirms that anastylosis may entail active conservation, not only before the actual intervention, but even afterwards, for
ensuring the stability and durability of members. In addition, it highlights the importance of maintenance planning so that anastylosis can have the desirable effects in the long-term. Hence, it becomes important to include anastylosis in the wider field of heritage management and conservation.

The final result of this anastylosis is difficult to judge. According to a particular professional, it is unsuccessful, since the monument is neither a comprehensible building nor a romantic ruin (see CCAM 1994b, 210). However, it would be unfair to criticise the end result so harshly. As the restorer of the monument explains, every intervention is an ambiguous action and public opinion can view it with criticism and doubt, especially in monuments with great historical and artistic value (Papanikolaou 1985, 5). The monument has great values attached to it, and indeed any intervention should be carefully and strictly judged. Criticism should always be done in ways in which it can be constructive, so that past experiences can teach us lessons in improving the methods with which anastylosis is implemented. The Erechtheion is surely neither a ruin nor a complete monument. Its anastylosis indicates how it looked in its prime time. Diverse issues have been raised but in total the restorers have done their best to stabilise a monument suffering from past restorations and enhance it through anastylosis.

4.1.2 The Parthenon

The Parthenon (447-433/2 BC) was a monument to the Athenian power. It is a Doric temple incorporating Ionic elements (figs. 28, 53-56) and with exquisite architectural refinements and sculptural decoration. Since antiquity, it has survived many vicissitudes from earthquakes, fires, historical interventions and repairs, including transformations into a Christian basilica, a Turkish mosque, and a gunpowder arsenal, as well as extensive restorations.

In 1975 the CCAM undertook responsibility for the monument, after realising the necessity of intervention. Its form in 1983 (fig. 30) was acquired after restoration in the first half of the 20th century by Balanos (fig. 29) and the 1981 earthquake (fig. 31). Quantitative preservation was greater than in most ancient temples. Qualitative preservation presented problems due to gravity, environmental temperature, wind,
water, microscopic organisations, vegetation, and expansion of metal joints (figs. 32-36). The east side of the temple was preserved in its original form, with deformations by the 1980's earthquake (fig. 31a). The west side was relatively well-preserved (fig. 31b). The north side had been extensively restored while small-scale restorations had been undertaken on the south side. Parts of the original ceiling survived in the west colonnade. The crepis was preserved throughout and the floors of the colonnade, the pronaos and the opisthonaos survived almost complete.

4.1.2.1 The anastylosis programme

The anastylosis programme began in 1986 and is still in progress. It is methodologically divided so as to correspond with demands concerning removal of deterioration causes, better conservation, and enhancement of values.

Proposals to remove deterioration causes include dismantling of restored parts (fig. 39) to extract the oxidised and expanded metal components (figs. 32, 33, 41a), which are documented and preserved in a museum. Shifted members are repositioned correctly (figs. 37, 44, 45). Improved conservation emphasises the choice of durable and compatible material, such as titanium alloys (fig. 43) and Pentelic marble (figs. 40-42). The works include restoration and consolidation of stone members and surfaces (fig. 46c), studies on earthquake protection, and organisation of dispersed material that will not be re-assembled (figs. 46a, b). Traditional or modern devices are used for cutting and working new marble blocks (figs. 52a, b). An electric pantograph replicates forms in marble (figs. 52c, d). Proposals for improving the values of the monument encompass minimum interference with ancient material, incorporation of surviving dispersed material, and correction of errors of earlier restorations. They aim at ensuring conservation and structural stability and at enhancing educational values (Bouras 1983c, 404; 1983d, 414-418; Korres 1994d, 123; Zambas 1989, 155-159).

Research studies include examination of structural problems and the earthquake resistance of the building; exploration of the quantitative preservation of stones; laboratory experimentation for conservation of members and production of artificial patina and mortars suitable for use on the marble; archaeological and architectural research; development of computer programmes to determine the original location of

For organisational reasons the programme is divided in twelve stages (figs. 53-56) that correspond to a logical division of the parts of the building. The greater part of them is now complete. The work-site is organised according to the time and space arrangement of the programmes (figs. 38, 47-51) (Bouras and Zambas 2001, 35; Casanaki and Mallouchou 1985, 82; Korres 1983e, 501-514; 1994d, 119-124; Korres and Bouras 1983, 2; Paraschi and Toganidis 2002, 17; Touloupa 1985, 9).

4.1.2.1 Observations and discussion

4.1.2.1.1 Analysis of objectives, and whether or not they were met

The objectives focus on eliminating the deterioration causes and improving conservation (figs. 32-36) of the building. Both aims are related to problems presented by past restorations, atmospheric pollution, visitor wear, fires, earthquakes, and natural ageing (Casanaki and Mallouchou 1985, 82; Bouras 1983c, 401-405; 1985b, 87-89). Through the work that has been completed so far, it can be concluded that the objectives seem to be achieved. As the Erechtheion suffered from the harmful materials of the past anastylosis, so did the Parthenon. Parts of the monument are dismantled in order to extract the damaging material and consolidate them, amending the incurring damages. Visitors are not allowed anymore inside the building, so excessive wear has stopped. Obviously, until the entire anastylosis programme is complete, it will not be clear whether these two aims have been accomplished, but some indications from the completed works show their possible future achievement.

Anastylosis also aims at enhancing the historical, archaeological, scientific, artistic, and functional values of the monument (Casanaki and Mallouchou 1985, 82; Bouras 1983c, 401-405; 1985b, 87-89). It is more difficult to identify whether this objective has been fulfilled, simply because the works are still in progress and any judgements
are only indicative and not conclusive. The values that will certainly be enhanced with anastylosis are the historical, archaeological and scientific ones, since the extensive research, undertaken before and during the interventions, reveals them and anastylosis cannot but annotate them. However, an inconsistency should be noted. A participant in one of the international conferences (Drosogianni in CCAM 1995, 246) stated that there is a seeming absence of a study about the Byzantine wall paintings, traces of which were found in the Parthenon, even though the committee affirmed the conduct of these studies (CCAM 1995, 247). Since respect towards the surviving traces of the later history of the monument is growing, their examination and preservation should be more systematic. Many historical phases of the Parthenon were obliterated during the past anastylosis; for instance, the remains of the mosque in the cella were removed in the mid-19th century. At that time, though, restoration of the Parthenon was related to the revival of Hellenic culture, thus, historic values concentrated in the existence of the monument as the exceptional conception of classical civilisation.

Additionally, the enhancement of the artistic and the functioning values of the monument can only be judged after all works are completed, though some preliminary assessments will be made later on.

Two factors in deciding anastylosis are the experience gained from Erechtheion and the maturing of opinions (Bouras 1983c, 401). This experience certainly assisted in understanding how to resolve the problems presented in the Parthenon and in highlighting past mistakes. Thus, the intervention was further advanced while enhanced by the development of opinions through time and technological advances.

In general, it is quite difficult to reach a certain conclusion about whether the objectives of the restorers have been met, since the anastylosis is not complete yet.

4.1.2.1.2 Theoretical framework of the anastylosis works

The *Venice Charter* is the principal theoretical guide. As mentioned before, it forms the basic framework of anastylosis works undertaken in classical monuments in Greece. It was about twenty years after its establishment that was adopted in the Parthenon anastylosis, which indicates its growing influence, despite doubts
regarding its effectiveness in the 1970's (see Chapter 3). As the works have not
finished yet and the theoretical framework for anastylosis is still evolving, the
validity of the Charter is proven once more. It should be noted, though, that the
charter is not followed without speculation. The president of the CCAM
acknowledges relativity in observing its principles and consequent free interpretation
of its articles (Bouras 1983b, 407; 1985b, 90) to make them more applicable to the
anastylosis of the specific monument.

The multidisciplinary character of the interventions, according to the interpretation of
Article 2 of the charter (Bouras 1983b, 407-411; 1985b, 91-93; 1994b, 89-90), is
reflected in the two committees that undertake the anastylosis. The main group of
professionals (CCAM) is responsible for the theoretical guidance of the works and
the second one (SRAM) undertakes the technical implementation. The synthesis of
CCAM and the working groups has been analytically discussed in the Erechtheion.
SRAM consists of architects, archaeologists, civil and mechanical engineers,
chemical engineers, conservators, stonemasons, draughtsmen, photographers,
secretaries and accountants. Thus, a wide range of specialists are involved, focusing
solely on this project. Special note should be made of the civil and structural
engineering disciplines whose input in this anastylosis proves more than necessary.
Intensive engineering studies are undertaken in order to establish the stability of the
structure and its capability of withstanding various forces, as well as in order to
examine the durability of materials. These studies are developed further and are more
analytical than in the Erechtheion, probably because of time and the specific needs of
the Parthenon.

The institution of international conferences instigates participation of many
disciplines that contribute with their comments and suggestions to the decision-
making. So far, six conferences related to the anastylosis works on the Acropolis
monuments have been conducted. Quite often it depends on the opinions of the
participants whether the preliminary studies will go forward (see Bouras in CCAM
1985, 195). Fruitful discussions and debates advance the approaches, by exercising
criticism and embracing efforts. Distribution of questionnaires about certain issues,
in two conferences, indicated the Committee's seriousness to place its work under
the critical eye of experts and resolve problematic matters. Co-operation of experts is
intensive, since laboratories in Greece and abroad collaborate on multiple conservation issues (see Skoulikidis in CCAM 1985, 203).

The aim at improving the values of the monument is in accordance with Article 3 of the charter (Bouras 1983b, 407-411; 1985b, 91-93; 1994b, 89-90) and has been discussed above. However, not much discussion of values takes place, although it is acknowledged by the committee (see Bouras 1994b, 102-103) that their systematic analysis leads to better understanding of the monument itself and the ways in which it can be preserved and presented to current and future generations.

Interestingly, though, some identified values of the monument, specifically, its social role and educational potential, are characterised as functioning. Education for both scholars and visitors is given particular attention, as legibility is improved and the potential to study the monument is provided through its restoration to those interested. It is in this sense that the 'socialisation' of the Parthenon is achieved (Bouras 1983c, 401-405; 1985b, 88-89). Projection of the social role of the Parthenon highlights the current approaches of making ancient monuments part of the activities and interests of the people. This is a remarkable approach to anastylosis, as it contextualises it under the idea that educational values are interrelated with social and cultural ones. Education is not perceived *per se* but as having wider implications by relating the monuments with the society and its needs.

Respect for the decoration of the Parthenon and care for preserving its setting are in accordance to Articles 5 and 6 respectively (Bouras 1983b, 407-411; 1985b, 91-93; 1994b, 89-90). Article 5 refers to making the monument useful for some social purpose without proceeding in modifying its layout or decoration. This does not relate much to the undertaken intervention. The ability of the restored monument to educate people and become part of their everyday life is regarded as its social purpose. There are no plans for using the Parthenon for any activities, apart from visitation. The social purpose refers to its symbolism and how this is going to affect the public. Hence, no actual question on altering its layout or decoration is posed.

Respect for the setting of the Parthenon is shown in caring for the entire site. Anastylosis programmes have been or are currently undertaken in the main
monuments of the site (figs. 6-8), together with selective restoration of secondary edifices. The Acropolis rock is consolidated (fig. 61). Approximate re-establishment of the ancient paths is undertaken (fig. 62). Architectural and structural members and fragments are arranged and kept protected from adverse weather conditions in areas not impeding visitor circulation around the site (figs. 46, 65). The organisation of the work-site was designed in a way that it does not obscure the building with huge equipment while work is in progress, visitor movement is not obstructed, and the presence of foreign structures is aesthetically tolerable (see Korres 1983e, 513; 1985, 115; 1994d, 119; Touloupa 1985, 9).

Another aspect of the theoretical methodology concerns the removal of in situ sculptures, in accordance to Article 8 of the Venice Charter (Bouras 1983b, 407-411; 1985b, 91-93; 1994b, 89-90). Removal of some architectural sculptures from the Parthenon (figs. 57, 58) was a solution undertaken after examining all other possibilities, such as either leaving them to deteriorate under the atmospheric pollution or hiding them behind thick glass in situ. The first alternative would not have been the best way to resolve the problem as deterioration is what architectural conservation strives to tackle. The addition of other structures (glass) on the monument would affect its form, its authenticity, and its aesthetic appearance. Due to the high levels of atmospheric pollution in Athens, removal of sculptural elements seems the only acceptable solution. This naturally raises various issues. Firstly, atmospheric pollution is a main deterioration reason. Interventions cannot address the environment and this problem continues to exist. It is considered a 'political problem' that needs to be addressed by archaeologists, architects, and restorers in order to find a sustainable solution with regard to the environment (Haselberger in CCAM 1995, 219). Realistically, this kind of action may not have an impact on the relevant legislation and undertaken measures, but it may influence decisions.

In addition, the removal of sculptures necessitated their replacement with copies. Suggestions focused on casts, either from marble or artificial stone, or on schematic flat plaques (CCAM 1985, 198-200; CCAM 1995, 200-223). The final decision concluded in cast copies. Their incorporation was decided for reasons of structural stability, since most removed elements are architectural members too, as well as for not diminishing the educational values of the monument. Objections in the
international conferences were intense. Arguments expressed speculation over sacrificing authenticity by extensive incorporation of new material (Dimacopoulos in CCAM 1985, 192) and over falsifying the monument by introducing stage scenery that would superimpose the ruin (Dontas in CCAM 1985, 197; Papageorgiou-Venetas in CCAM 1990, 144). The authenticity of the monument in relation to the amount of new material incorporated in the monument for structural or other reasons is discussed below. The creation of the so-called ‘stage décor’ is a matter that needs painstaking thought. Addition of sculpted copies (figs. 53c, 54b, 55, 56c) does not necessarily diminish the aesthetic appearance of the monument. Looking closely at it, it is difficult to distinguish between original and copied sculpted members. Since most copies appear at height, mainly in the frieze, and skilled stonemasons are employed, the possibility of noted inaccuracies is almost non-existent. However, the best solution should derive from thorough studies, such as those undertaken in this case, and visitor studies too, so as to identify the public opinion, given that the educational value of the monument is addressed to the public. But visitor studies were not carried out. Furthermore, lucid information on the fact that these elements are copies would erase the danger of misunderstanding by the viewers. But the amount and type of information is not known as the works have not finished. The choice to keep the removed sculptures in the Acropolis museum is exceptionally important so as not to be deprived of their context. The museum is found within the site and the new one will be quite close too.

Article 9 of the charter is adhered to by respecting the original form and features of members and by avoiding new work on them (Bouras 1983b, 407-411; 1985b, 91-93; 1994b, 89-90). Indeed, the ancient material is respected since no new points are created for joining new and original members and the ancient cuttings are used; members found in wrong locations are correctly repositioned; there is minimum interference with the ancient material, as far as the required consolidation allows it. Respect for the original form of the monument is ensured by long-term research – a broad range of studies is conducted – which aims at acquisition of exhaustive knowledge of the architecture and structure of the building, in order to preserve them without alterations or falsifications.
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Article 10 of the charter is fully respected (Bouras 1983b, 407-411; 1985b, 91-93; 1994b, 89-90), similarly to the Erechtheion anastylosis, by employing new and traditional techniques and by using both modern and traditional tools for working on the marble. This confirms that all kinds of methods and techniques are used to achieve the best possible results.

Article 11 of the charter is also respected (Bouras 1983b, 407-411; 1985b, 91-93; 1994b, 89-90). Restorers declare their faithful following of the image and form of the monument, as it has survived through time. This is confirmed by a further principle adopted in this anastylosis, which asserts the keeping of the changes in the appearance of the building to the minimum. So far, its image has not altered significantly (figs. 53-56, 59), similarly to the Erechtheion. However, suggestions about restoring the roof over the west wing spark questions about the kind of protection that will be achieved and the extent of the intervention. Arguments for its restoration focus on enhancing architectural and aesthetic values, since original material exists and has been prepared for assembly by previous restorers, and on achieving protection against weather conditions (Hueber in CCAM 1995, 229; Korres in CCAM 1995, 204-206). But if this intervention is undertaken, then the form of the monument will change dramatically, no matter what the benefits will be.

Another issue refers to the harmoniously integrating, yet differentiating new from original members on the building, in accordance to Article 12 (Bouras 1983b, 407-411; 1985b, 91-93; 1994b, 89-90). This is achieved, according to the restorers, with inscribing the anastylosis date on the new members (fig. 63). This method assists future researchers and restorers to correctly identify which parts of the structure derive from the recent anastylosis. However, this action does not resolve the issue of differentiation, as far as the image of the monument and its understanding by the public are concerned. No other adopted method of differentiation is mentioned, even though the contrast between new and original members will be quite obvious. In this sense, the restorers hope that the passage of time or the application of artificial patina will eliminate the differentiation (see Bouras and Zambas 2001, 16; Skoulikidis 1994b, 33-34). Concerns with regard to setting the new material with the white surfaces alongside the coloured and weathered surfaces of surviving marbles emerge (CCAM 1990, 133-134). So far, not much chromatic difference, especially in the
external colonnades and the internal walls, is noted, only colour differentiation in the
column drums in the internal colonnades (figs. 53b, c, 66b, 67). Since the works are
not completed yet, it is impossible to make final judgements. In general, there are no
striking differentiations, such as those appearing in the Erechtheion. Of course, the
option of artificial patina seems to be a good solution. It does not necessarily falsify
the truth of the monument, as the intervention itself is the first to falsify it. Yet,
artificial patina should not attempt to faithfully imitate the patina of age of surviving
members; it should rather be carefully produced, its results should be checked before
the final application; and it should be made clear that it has been applied. If all these
prerequisites are fulfilled, then it becomes a reasonable choice that achieves
harmonious integration and slight differentiation of integrations. The opposing
argument that with time, artificial patina will be similar to the original one (see
CCAM 1990, 133-134), is valid, but plenty more options can be employed in
combination to guarantee differentiation.

Another point to be made regards Article 15 of the charter and the restorers declaring
that the interventions on the Parthenon are in accordance to the international
Similarly to the Erechtheion, the programme was initially planned with the aim of
saving the monument from further damage and improving its conservation. After
initiation of the works, it was decided that anastylosis would increase the static
stability and legibility of the monument (see Bouras and Zambas 2001, 7). The
original plans were modified, especially since many members had to be dismantled
and repositioned and more surviving members were recovered from excavations in
the surrounding area. Thus, the definition of anastylosis by the Parthenon restorers
agrees with the international definition of the term. Yet, the undertaken interventions
include conservation of surfaces, stabilisation, and more, while the monument is
neither ruined nor deriving from an excavation – as specified in the charter; it is a
monument standing since antiquity and having suffered damages and alterations due
to time and previous restoration efforts.

Vast amounts of publications and documentation were produced in the past regarding
the Parthenon and are followed up by extensive publications of archaeological and
architectural research undertaken recently, which form the basis of the development
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and implementation of the anastylosis study. This large amount of published studies
initiates with an exhaustive publication (Korres and Bouras 1983) that analytically
describes the architecture, construction, and history of the monument and outlines the
of the scientific studies and proposals for the twelve anastylosis programmes is a
prerequisite for any undertaken work. It results in providing transparency of the
works and time to interested scholars to study and comment on the interventions.
Preliminary and final studies are published every year. They are all technical and
meticulous, including summaries in English, in an effort to facilitate access to
information for foreign scholars. By the end of the anastylosis, it is guaranteed that
documentation will be more than exhaustive. The proceedings of the international
conferences are published too, providing an exceptional insight into the works, the
constructive criticism, and the spirit under which these meetings are conducted.

The extensive documentation and publications are in accordance with the relevant
requirement in Article 16 of the Venice Charter (Bouras 1983b, 407-411; 1985b, 91-93; 1994b, 89-90). These publications are easily accessible throughout academic
libraries. Creation of an archive would be the final step towards this huge
accumulation of information. However, so far no such action seems to be considered.

Further principles complete the Venice Charter by referring to the special needs of
classical monuments. Such are: reversibility of interventions, preservation of the
autonomy of members and their static function, keeping changes in the appearance of
the monument to a minimum, respecting the past restoration as a historical event, and
restricting operations to already restored parts (Bouras 1983b, 407-412; 1985b, 90-94; 1994b, 91; CCAM 1994b, 186-187). The last three are followed in the
anastylosis programme of the Erechtheion too and have been discussed above. They
are all particularly important in monuments previously restored.

Respect of the past restoration as a historical event is directly connected with the idea
of not altering the image of the monument (Bouras 1983b, 407-412; 1994b, 91). In
this regard, though, the monument will not acquire the state it had before the 1687
explosion but the form it had after the anastylosis of Balanos. The Parthenon forms a symbol of classical civilisation and has been depicted in numerous photographs, books, posters, and copied structures. Alteration of its image may come to symbolise alteration in its history and character. However, a CCAM member comments that 'the proposed anastylosis never aimed at restoring the Parthenon to one of its past phases. The restoration will effect a new configuration, which will depend on the extent of our capabilities' (Korres in CCAM 1985, 196). Hence, no absolute respect can be achieved, making the above principle a relative concept.

The principle related to preserving the autonomy of architectural members and their static function, which, in turn, leads to self-preservation of the ruin, derives from observation and study of the architecture of classical monuments. As these monuments were erected with pieces of stone or marble, connected to each other with little or no mortar and with small metallic joints (see Chapter 3), their members preserve their autonomy and constitute 'existing but dismembered parts' that can be re-integrated and repositioned (Dimacopoulos 1985, 18). Past examples that proved unsuccessful in the long-term were those that altered the static system. In this regard, the principle can be applied in anastylosis of these specific structures. Its significance lies in preserving the structural stability and the authenticity of the structure and design of the monument.

In the Parthenon, great emphasis is placed upon the principle of reversibility. Speculations focused on its clarification as a guiding principle and the 'security' it guarantees in interventions (CCAM 1985, 195 and 205), highlighting its significance and potential attainability. As discussed before, reversibility is attainable, given minimum interventions and detailed recording of the works. Yet, it remains a principle that cannot be accurately defined. Its relativity reminds us of similar restoration principles, such as the respect for the values of the monument, which can be perceived differently by experts and by the public. Efforts for achieving reversible interventions are certainly more encouraging rather than overlooking the matter, because reversibility cannot be properly defined or because it is doubtful whether it ensures non-damaging interventions.
However, arguments, such as reversibility may possibly lead to multiplying the extent of intervention (CCAM 1985, 191-192; 1990, 166), should not be ignored. Extending the intervention simply because there will be possibilities of reversing the undertaken actions forms dangerous ground. Reversibility should be strongly linked with minimum interventions, since our aim is to intervene without affecting the authenticity and without altering the image of a monument, especially if it has been restored in the past. The essence of reversibility is found in the ability to reverse the anastylosis and return the monument to its previous state, due to respect for the authentic documents of the past. If the undertaken interventions can be reversed, then changes can be made for the benefit of the monument.

4.1.2.1.3 Issues arising from the project

Issues discussed in the Erechtheion with regard to past interventions and their catastrophic results are similar in the Parthenon, as the previous restorations were undertaken by the same people, in similar times, employing the same methodologies. Differences and similarities in the current restoration approaches to the Parthenon and the Erechtheion are noted too. Similarities are because the same body (CCAM) is responsible for both monuments. Differences emerge due to time, the evolution of restoration theories and principles, and the development of modern technology. Moreover, despite both temples being part of the monumental Acropolis complex, the Parthenon forms the national monument of Greece; hence, symbolic meanings are attached to it, justifying the abundance of time and care for its anastylosis.

However, it would be expected to decide, plan and implement anastylosis in the framework of a conservation and management plan, but is not certainly known whether such a plan exists for the Acropolis. From personal communication with people who have worked in the archaeological sector in Greece it was revealed that such plans exist but it is difficult to access them. They are kept into the archives of relevant services or committees but they are not referred to in any publication regarding the site in question. Aspects of a management plan for the Parthenon are revealed through actions linked with its anastylosis and with providing for the site of the Acropolis, as discussed above (4.1.2.1.1). Further observations and comments on their effectiveness and their provisions for the future will be discussed below. Such arrangements would not be as carefully thought-out, had they not been part of a
management plan. However, a management plan is the absolute guide in our intervention to a monument and a site, and it should be available to everybody interested, as this also forms means for transparency and for extracting constructive criticism on its effectiveness.

The reason why anastylosis was chosen relates probably to the fact that the decision on the kind of work necessary for the monument constituted anastylosis according to its international definition. Members already re-assembled on the monument had to be correctly repositioned, while more parts were discovered and could be re-integrated. Additionally, the choice was based on the fact that anastylosis had already been implemented on the Erechtheion, a monument with similar structural characteristics and presenting similar problems to the Parthenon. Alternative treatments that could have been chosen were probably rejected, because the decision on anastylosis emerged after examining the requirements of the monument and the need for its structural stability, as well as because further original material was discovered. Anastylosis was also chosen in order to enhance the values of the monument and improve its conservation state.

However, issues raised from the educational values of monuments regard the effect they have in the extent of the intervention and the alternative ways in which they can be enhanced. In architectural conservation and restoration, education and improvement of legibility are projected as strong motivations. Even though this is considered acceptable, it is also debated how much these incentives should affect decisions on the manner in which an intervention is implemented. Obviously, by restoring a ruined or unintelligible monument its educational values are improved and the visitors learn more about ancient architecture and archaeology. The situation becomes worse in cases where education is wrongly projected to justify extensive interventions in an era when restoration theories strongly advocate minimum interventions and favour respect for the authenticity of monuments. This is exactly the source of the dilemma for the Parthenon and the other Acropolis monuments. The main aim should become the compromise between enhancing educational values and respecting the authenticity and character of the monument as it has survived over time.
In this regard, questions are voiced about how education should be achieved. Many professionals suggest other means, such as models, perspective drawings, and descriptions (see Papageorgiou-Venetas in CCAM 1990, 145; Dontas in CCAM 1994b, 196-197). Yet, the Acropolis Committee replies that 'models and drawings cannot recreate the direct experience of space or of the perfection of details' (Bouras in CCAM 1994b, 185). This is why, a compromise should be sought, and a combination of solutions, such as minimum intervention with well thought-out explanatory material, should be adopted in order to satisfy the needs of visitors, of scholars, and of the monument itself. This compromise forms an efficient way to accommodate the need for interventions and to achieve education without resorting to extensive anastylosis.

In addition, this matter that is directly connected with the social role of monuments and the educational potential inherent in tourist activities should be the subject study of experts from the heritage education and visitor studies field. Interestingly, it is admitted that 'figures from social studies and polls, which might throw some light on these issues, lack' (Bouras in CCAM 1994b, 185). It is worth wondering why they lack and why there are no provisions to make informed decisions by consulting the visitors and exploring their views. This anastylosis project is characterised by and praised for its multidisciplinary approaches. However, social scientists, education specialists, and heritage experts are involved only in producing relevant information and not in the decision-making. Given the significance of the Parthenon as a national and international symbol of classical antiquity, this seems to be an unwise lack of means and consideration for both the monument and the public.

The Parthenon is also considered a social monument (Bouras 1983c, 401-405; 1985b, 88-89). By attaining this social character, it is transferred to the realm of living monuments. However, according to the distinction between dead and living monuments, which was used to determine the extent of intervention to them, the Parthenon can be identified as a non-living monument. It is not used anymore as a place of worship, in other words according to its original function. Still, it is a living monument as it continues to exist in a material form and reflect values of history, art, and culture for people. It is in this regard, that the concept of dead monuments is no
longer applicable, but every monument is considered to have a social character, being part of the society and its daily life.

Tourism is a significant driving force in anastylosis activities throughout the Mediterranean, since all countries of the region rely heavily on tourism for revenue. Yet, tourism is rarely acknowledged as a factor influencing decisions, probably because of its negative connotations. This appears to be the case for the Parthenon (fig. 60b). The Acropolis of Athens is the most visited site in Greece, as it is located in the heart of the capital and symbolises the classical civilisation, which is considered the basis of western civilisation. However, nobody admits that tourism instigated decisions on the anastylosis and its extent. Emphasis placed on the educational values of the monument and the need for its socialisation implies that tourism has been influential enough on the undertaken anastylosis.

National identity as a driving force becomes an important issue that needs to be further discussed. It does not necessarily mean that the impact of national identity is viewed in a negative light. All driving forces are influential in management and conservation decision-making, but they have often been abused. Thus, nowadays, any reference to national identity is perceived doubtfully regarding its intention. The Acropolis monuments carry a long history, ever since the 5th century BC. They document the history of the Greek nation. The role of national identity is not overlooked either by the committee itself or by various experts, who suggest that the history and symbolisms should be respected, without concealing the different ways in which historical events set their mark on this eminent monument (see CCAM 1985, 194; 1990, 109 and 121; 1995, 222; 2003, 442). Anastylosis decided on the basis of the national symbolism of the Parthenon is not undertaken with a nationalistic viewpoint. The only impact of this symbolism is the amount of time, effort, and money spent on the monument in comparison to other Greek classical monuments. The current anastylosis does not impose one particular period of the life of the monument. The represented period is the classical one simply because of the abundance of its surviving elements and image. In addition, as Papageorgiou-Venetas (in CCAM 1990, 142-143) explains, the 19th century restorative vision of the Acropolis monuments eliminated most of their history, such as the remains of a
mosque inside the Parthenon and of a Christian apse. This history is missing now and, hence, it cannot be restored. But that vision is entirely absent at this time.

The extensive research undertaken should be praised, as it resulted in the acquisition of thorough and comprehensive knowledge of the monument. Such studies are self-evident in their importance for anastylosis – they have already been discussed in the Erechtheion. The advances of modern technology and the emergence of new disciplines and fields contribute too to building up knowledge and assisting in successful undertakings. As stated by a committee member: ‘the relation between study and research is a basic characteristic of restoration works’ (Zambas 2002b, 11).

Part of the above-mentioned research is related to the analytical examination of the qualitative and quantitative state of preservation of the structure, including the deterioration causes and their effects (see Korres 1983d, 249-254; 1985, 103-111). It is more detailed and thorough in comparison to that of the Erechtheion. Percentages of surviving members are given in detail, being distinguished in terms of surface and volume. They are compared with numbers of surviving elements, surviving heights, and estimated dimensions. Yet, as a committee member specifies, there is always a difference between quantity and percentage (see Korres in CCAM 2003, 451), which makes it hard to establish amounts of surviving material lucidly. Nevertheless, every effort at identifying the quantity and quality of original material provides concrete information and leads to well-informed decisions on introducing new material for structural reasons only, since reasons such as education and improvement of legibility are an entirely different matter. Nonetheless, not much information is provided with regard to the amount of new material, especially since the interventions were criticised for their excess (see CCAM 1985, 189 and 194).

Indeed, the interventions do not seem moderate, as great amounts of material need to be dismantled, conserved and repositioned, while further discovered members are re-assembled (figs. 64, 66). At the same time, a considerable quantity of surviving material had to be dismantled from the monument and transferred to the museum for better protection. All this material is or will be replaced by copies. As a consequence, it is understood that the monument is under strain because of the introduced new material. The committee argues that ‘no limits are set by the Venice Charter to the
proportion of new material that can be added’ (Bouras 1983b, 410; 1985b, 92). The amount of new material that can be incorporated in a monument is under constant discussion in anastylosis. Agreement about whether such limits should exist in numbers and what these numbers should be does not exist, although everybody projects the importance of minimum interventions. Surely, setting limits for the extent to which we can intervene to a monument contributes to achieving minimum interventions. Theoretical principles should be followed by some technical guidance, because, despite the magnitude of theory, many aspects of anastylosis depend on technical matters.

Additionally, the incorporation of scattered material raises questions about how desirable or effective such actions are, because a large proportion of original faces or surfaces may be lost or because they remain unidentified. Of course, it is not easy to discuss in technical terms the amount of volume and surface lost in dispersed members and fragments, since architects should be the ones to make these judgements. The architectural conservation community represented in the Acropolis conferences appears divided on the matter. On the one hand, introduction of non-identified members in random locations is considered to render the intervention a reconstruction (Hueber in CCAM 1995, 221-222), while their safe storage would be the ideal solution (Mainstone in CCAM 1994b, 202). Conversely, Hoepfner (in CCAM 1995, 207) declares that if unidentified members remain on the ground, they prove entirely useless. However, it would probably be best to explore whether such decisions can be taken, after examination of these fragments and their state of preservation. Estimation of how much new material is needed for their re-assembly could be determinative in the decision on the use of the fragment. Speculations on the final result and the authenticity of material and form of the monument are essential for deciding upon the best solution.

The relation between the values of the Parthenon and the responsibility borne by the two committees is projected as a strong argument in favour of extensive interventions: ‘this responsibility should not make us supporters of the passive stance towards preservation’ (Bouras 1983c, 401). This could be considered a radical attitude, as it seems to entail that the greater the monument and the responsibility, the more extensive intervention. Yet, anastylosis should be planned and implemented
with the utmost degree of consideration and care. The extent of intervention seems
great in the Parthenon and relevant doubts are often expressed from many
professionals of the two committees, as well as nationally and internationally.

Generally, it is difficult to judge whether the implementation of the anastylosis is in
absolute agreement with the proposed interventions, since the works are not
complete yet. Looking at pictures of damaged elements, the description of their state
of preservation is perfectly visualised. Many of the programmes are still in progress,
hence, it becomes complex to check every single element. We need to rely on the
description and the information provided by the restorers. For the completed
programmes, the same is valid. What we can certainly acknowledge is that the form
of the monument has not changed, especially if we compare photographs of the
Parthenon before and after the recent anastylosis.

An imperative issue raised in every anastylosis is authenticity. As discussed
previously, the concept of authenticity is quite relative; therefore any of its aspects
can be examined as two different sides of the same coin. For instance, the use of all
available surviving material is in accordance with respect for the authenticity of the
material. Yet, if the state of preservation of the original members is poor and
conservation and additions so that elements re-acquire their form are needed, then
authenticity may become more relative and doubtful. In this sense, extensive
interventions affect the authenticity of a monument. This is why the latest restoration
theories favour minimum interventions. The authenticity of a monument is also
reflected in the way and the form in which it has survived through time. This is what
the anastylosis of the Parthenon and the Erechtheion aims at. In addition, authenticity
is affected by removing original material and replacing it with copies. This issue is of
great significance here, as many sculptural and architectural elements are removed in
order to be conserved and preserved in an environment less harmful than the polluted
atmosphere of the city. Introduction of extensive amounts of new material, for
whichever reasons, affects authenticity as well, giving way to discussions and
speculations by restorers as to the best possible way of introducing new elements
without falsifying the so-called truth of the monument. Authenticity is also expressed
in the original structural system of the building. In the Parthenon, comments have
been made about the importance of preserving the authenticity of the monument,
rather than its original form (Lavvas in CCAM 2003, 453-454). What is conclusively understood is that the concept of authenticity is indeed relative and that each action needs painstaking thought and consideration of its result. There are no rights and wrongs in achieving authenticity, since it is difficult to define it. Yet, carefully planned interventions can preserve the originality of the monument, either in its form, material, or any other aspect that may be identified.

Another aspect about this anastylosis regards the organisation of the work-site. It is impressive in that it takes into account criteria of time, space, economy, less obstruction in terms of appearance and care for the safety of both visitors and personnel. It is quite obvious and obstructive in a way, but that is understandable since the project lasts a long period of time. However, the organisation of the work-site covers a wide variety of aspects and it is outlined as an individual part of the anastylosis study. This practice is rarely noted in other case studies. Considerations about organising the work-site are common, but guidelines and the establishment of criteria for its planning are not expressed. However, they are important for accommodating visitors and personnel, as well as the conduct of the works.

Computer technology is extensively employed and multiple programmes have been developed either for documentation purposes or for determining the correct position of structural blocks and scattered fragments (see Harrington 1995, 50). Further suggestions have been expressed for using computer technology to simulate and test restoration plans before putting them to action (see Seki in CCAM 1990, 241). The Sagalassos project, as it will be shown in the following chapter (5.3), employs computer visualisation techniques with satisfactory results. Given the latest advances in computer technologies, similar applications could improve anastylosis interventions, since it will become possible to test matching fragments, assess the need for new material, and examine the result of its introduction.

Regarding the provision of information to the public, a simple notice board (fig. 60a), near the Parthenon, briefly outlines the history of the monument, from its erection to its current anastylosis. Nonetheless, it offers limited information and definitely does not accommodate the needs of the interested public. CCAM produces educational programmes and material for schools, delivers seminars to universities,
organises special events, conferences, and exhibitions. Although not much information exists with regard to the visiting public and their preferences, these steps advance the process of informing those interested.

Finally, the advantages of the undertaken anastylosis are found in: eliminating the deterioration and improving the state of conservation of the structure; conducting extensive research and, thus, enriching the knowledge of the monument; employing multiple disciplines for planning and implementing the works, hence advancing research on anastylosis methods and techniques; improving the legibility and the education potential of the Parthenon, as well as in enhancing its. Disadvantages are found in extending the degree of intervention and affecting the authenticity of the monument by projecting educational reasons. Additionally, possible efforts to promote tourism activities may not be directly acknowledged and, thus, their impact cannot be assessed.

4.2 The Avaton or Enkoimeterion and the Propylon of the Gymnasion in the Sanctuary of Asklepios at Epidauros

The monuments of the sanctuary of Epidauros (figs. 68-70) show many examples of anastylosis. This study focuses on the Avaton and the Propylon of the Gymnasium. Their history is given in Appendix D2.

4.2.1 The Avaton or Enkoimeterion

The Avaton is a porticoed building (stoa), situated north of the Temple of Asklepios (fig. 70). In its first building phase (380 BC), it consisted of its eastern part only. In the 4th century it expanded as a two-storied building. It was revealed during excavations in 1881 and 1940-1945. The excavators proceeded in completions of missing parts and small modifications.

At the time of the establishment of the Committee for the Conservation of the Epidauros Monuments (1984), its state of preservation was desperate, due to the lack of effective measures after its excavation, harsh weather conditions, vegetation, visitor wear, and looting. The stereobate of the ground stoa colonnade survived in
full height; the euthynteria survived in the east end; the parapets of the colonnade gaps were fragmentarily preserved; and the pillar colonnade of the ground floor was preserved in good state (figs. 79a, 80a).

4.2.1.1 The anastylosis programme
Excavation sections and clearings aimed at diagnosing the state of the structure (figs. 76a, b), chronologically determining elements, exploring dimensions, and enriching historical information. The anastylosis study is based on extensive documentation, including impressions of architectural elements and graphic restorations (fig. 78) (Maurommatidis 1987b, 26; 1987c, 9).

New porous stone for re-integrations and additions to the original architectural members is used, after research on their compatibility (fig. 84). Casts for imprinting disfigurements of original surfaces and traditional stonework tools for transferring these distortions in new stones are employed. Surviving conserved members (fig. 77, 83) are re-assembled in their original or matching locations. Integrated parts are joined with cement mortar and titanium rods. Thin plates of lead are placed between blocks to prevent dampness. Differentiation between new and old materials is achieved with rougher sculpting of the surface of the additions (fig. 81). Interventions are implemented in the same way in which the works in antiquity were done – transporting and setting up structural elements, sculpting and in situ elaboration of members (CCEM 1988b, 2-3; Katimertz 2000, 1; Maurommatidis 1987b, 26-27; 1987d, 34; 1999, 32).

The anastylosis programme includes restoration, conservation and anastylosis of the walls, the limestone benches, the east side, the sacred well, the Ionic colonnade, the stereobate of the colonnade of the ground stoa, the euthynteria and the stylobate at the east side, the external colonnade, the parapets of the upper colonnade, the ground floor pillar colonnade, the staircase, the Roman buttress, the natural ground and the wooden beams (fig. 76c, d, 79, 80). During clearing works, a large number of original members were discovered. Consequently, anastylosis in greater height, than the initial one, is implemented (CCEM 1988b, 4-7; Katimertz 2000, 2; Maurommatidis 1987b, 27-31).
Chapter 4: Case studies from Greece

4.2.1.2 Observations and discussion
The anastylosis programme is not completed yet. The following discussion and commentary are not conclusive, but based on actions proposed and currently in progress, as well as on relevant indications of the process and its expected results.

4.2.1.2.1 Analysis of objectives, and whether or not they were met
Conservation and anastylosis were decided because of the quantity of original material and its destruction from natural phenomena and constant wear by visitors. Primary objective becomes the protection of the surviving parts of the monument (Maurommatidis 1987a, 21). This is undoubtedly achieved, firstly because many original members are conserved and stabilised before being re-integrated to the structure. Secondly, by being reassembled they are not left on the ground to further deteriorate. Their reincorporation offers better protection to them and to the ruin.

An equally significant aim is the education that will be provided through improving the legibility of the ruin (Maurommatidis 1987a, 21). The re-assembled members, so far at least, allot the desired third dimension to the monument, thus, improving its legibility and enhancing its educational values. Notably, in most case studies, education is a primary reason and objective of the anastylosis programmes. Yet, problems arise when education is projected to justify extensive interventions. This seems to be the case here too. The actions described and planned are undertaken for the sake of educating the public. Many of these actions are quite extensive and require a great amount of intervention. For instance, proposals for reconstructing the wooden beams of the ground floor pillars are mainly justified by the educational benefits they may have (see Bouras in CCEM 1987a, 93), as reconstruction will clarify the structural layout and give morphological evidence of the monument, rather than ensuring its structural stability.

Furthermore, since anastylosis is considered ‘educational in its nature’ (Giraud in CCEM 1987a, 40), the continuous use of the term *didactic anastylosis* within the proposal is criticised and publications and interpretative material are suggested for preparing visitors before entering the archaeological site (Tanoulas in CCEM 1987a, 52). Educational values do not have to be enhanced only through anastylosis. A wide variety of means can be employed, individually or in combination, for informing and
educating visitors. The public may need extensive interventions to understand a monument, connect to it and be educated by it, but there should be limits to the degree of intervention, if we care for the ways that authenticity is reflected in a monument and we wish to minimally interfere with the material. Plus, the public should be consulted in such cases. Their ideas and opinions should be researched and taken into consideration if the aim is their education. Moreover, as already discussed in the Acropolis monuments, education and the public are strongly related with tourism, in terms of the financial profits from high visitation. This is certainly not acknowledged in Epidauros, even though it would be impossible not to consider tourism as a benefit.

Anastylosis of the Avaton aims at elevating the sacred space of the site (Maurommatidis 1987a, 21). The presentation of the site is indeed improved, especially since anastylosis programs are implemented at the Tholos and the Propylon of the Gymnasium. These issues will be more analytically discussed below.

Accordingly, we could safely assume that the objectives of the restorers are met or that they will be fulfilled, as long as the program is completed successfully and with consideration of the problematic issues.

4.2.1.2.2 Theoretical framework of the anastylosis works

The proposal is based on the Venice Charter— the articles of which are interpreted and the way they apply to the anastylosis of the Avaton is presented in detail (see Maurommatidis 1987a, 21-25).

An initial point relates to Article 2 of the charter and regards the establishment of a multidisciplinary committee responsible for the scientific decisions and the coordination of restoration and anastylosis of the Epidauros monuments (Maurommatidis 1987a, 21-25). The Committee consists of professionals from multiple disciplines, while skilled workers make up the technical personnel. Research is conducted in collaboration with geological institutions and laboratories. Accordingly, the technical issues raised in anastylosis are resolved with the cooperation of science and technology. They cannot be solved by experience only and cannot be confronted by archaeologists and architects alone. They need scientific
experimentation and knowledge. International conferences have taken place since initiation of the anastylosis works in Epidauros, similarly to those conducted with regard to the Acropolis anastylosis programmes.

An important matter regards the composition of CCEM that conducts the anastylosis program and the Central Archaeological Council, the body which approves the proposed works. Dimacopoulos (in CCEM 1987a, 17) underlines that three out of the seven members of CCEM are at the same time members of CAC. Although they have professional expertise and years of experience in the field, they can unintentionally influence other members of CAC. He also refers to 'a projected absence of other persons with a record and recognition in the field of anastylosis' (Dimacopoulos in CCEM 1987a, 18) as members of these committees. This statement should be taken into consideration by the bodies responsible for anastylosis works. Such committees have been established for the conservation and management of famous archaeological sites in Greece. Their institution is innovative and pioneering in the field, while it facilitates the work of the Anastylosis Directorate and ensures responsible restoration and anastylosis approaches. The multitude of disciplines collaborating and the diversity of opinions deriving from such collaborations form an exceptional example to be followed in future anastylosis projects, nationally or internationally. Nevertheless, some professionals are members of two or more committees. Undoubtedly, they have broad experience, which they use comparatively, striving for the best possible approach. The drawback is that this practice does not warrant a multitude of views and opinions, essential for multilateral approaches. Even if that is ensured by the conduct of conferences, it could be more beneficial for anastylosis practices to include more professionals in such committees and establish a group of experts with advisory role.

Regarding the training and education of restorers, the committee welcomes and positively considers the involvement of further professions in anastylosis, given the existence of relevant qualifications and guidance (see CCEM 1987a). From this we can presume the need for training programmes in anastylosis, not only in Greece but internationally too. There are established restoration schools and university courses on restoration and heritage management worldwide. If multidisciplinary approaches
are the future, then programmes should be organised and include extensive training and information on heritage preservation and on collaboration of disciplines.

Another issue relates to Article 3 of the charter and the elevation of the architectural elements and peculiarities of the Avaton (fig. 78) (Maurommatidis 1987a, 21-25). These features are significant evidence of its artistic and historical significance. Anastylosis projects and indicates the original form of the monument, as it becomes obvious from the works completed so far, and results in preserving it as a historic testimony of the ancient medical practice and as a unique architectural example.

However, uncertainty regarding some architectural details (Bouras in CCEM 1987a, 89) is acknowledged. Difficulties in estimating the original height of the columns of the lower stoa (fig. 82) (Coulton in CCEM 1987a, 37) and the subsequent decision for a more precise anastylosis in height after more structural elements were found (see Katimertzi 2000, 2) raise questions about the substantiability of information on which anastylosis was based. Archaeological and architectural studies were conducted, but the monument is located in an enormous archaeological site, where it is possible to find further surviving members. The accuracy of anastylosis is questioned in such cases, unless the site is fully excavated, recorded, and studied. Speculations over the priority of immediate anastylosis for protection and interpretation or of anastylosis based on sufficient evidence to proceed accurately and utilise a great amount of original members should not be ignored. This dilemma should be confronted in a well thought-out management plan. In this regard, the principle of reversibility addresses exactly the issue of possibly reversing the undertaken actions and incorporating further original elements in the future.

Another principle that follows Article 4 of the Venice Charter (Maurommatidis 1987a, 21-25) becomes the curbing of further deterioration to the monument. Conservation of structural members and the building itself is essential for its future preservation. A discrepancy is noted though. The specific article discusses the maintenance of conserved and restored monuments. Future plans, after anastylosis is completed, for preserving the acquired state of the monument and pausing possible continuing deterioration would be expected, but maintenance actions are not mentioned anywhere.
Anastylosis is undertaken in order to annotate the monument and, consequently, benefit the public, in accordance with Article 5 of the charter (Maurommatidis 1987a, 21-25), which discusses the use of monument for socially useful purposes. As shown in the Acropolis anastylosis projects, this socially useful purpose is freely interpreted as the education and benefit of the public and does not refer to a functional use of the monument.

The improvement of the legibility of the Avaton and the underlying of its role as the north boundary of the sanctuary follows Article 6 of the charter about the preservation of the traditional setting of the monument (Maurommatidis 1987a, 21-25). Even though anastylosis will result in increasing the height of the building, the impact of the Avaton will not be as great, because CCEM is currently implementing anastylosis in major monuments of the site and plans restoration or partial anastylosis of other monuments and arrangement of the dispersed material. Already the site looks more legible and its north boundary is defined. Such actions are important so that the restored monument does not impose on other buildings within the site, even though it will take some time before we have the whole picture of the site of Epidauros with its restored monuments.

Further technical issues with a theoretical background stem from Articles 9, 12, 13 and 15 of the charter and relate to respect for the original material (Maurommatidis 1987a, 21-25). Additions respect all parts of the monument and aim at providing unity of the image of the structure and regenerating the morphological unification of the two phases of its history. Respect for original material is also shown by the extensive research undertaken in order to decide the most compatible material for additions and completions. The initial proposal suggested limited use of artificial stone for completion of surfaces and wider use of natural stone in every other case, but a series of experiments resulted in stones with characteristics less encouraging than expected (see Maurommatidis 1988). It was then decided to use only natural stone. This procedure is indicative of the committee's seriousness in tackling technical issues, which is also reflected in the efforts to find effective measures for conserving the fragile surviving porous stone. These concluded in the use of lead leaves for waterproofing. Thus, the matter of selecting the most appropriate and
compatible material should be subject to examination of previous examples and scientific experimentation, so as to deal with problems of compatibility of integrated new material and ensure best results. As this matter was raised due to the principle of respect for the ancient material, the theoretical questioning initiated technical research and implementation. The fact that the solution of problematic situations does not depend only on theoretical speculation, but also on available resources that facilitate technological experimentation should also not be ignored.

Differentiation between new and original material (figs. 77a, 81b) is achieved by avoiding as much as possible new interventions on original members and slightly projecting new parts (Maurommatidis 1987a, 21-25). Completions have a different colour tone or technical roughness and information is inscribed in non-visible surfaces. The latter is discussed in detail in the Parthenon anastylosis. The other two techniques differentiate new members from original ones without creating extreme contrasts when viewed at a short distance.

According to Article 10 of the charter, a combination of both new and traditional techniques is employed (Maurommatidis 1987a, 21-25). Traditional tools are utilised to sculpt, elaborate, and work on the connection points of new members. Further traditional methods are preferred in the assembly of new and original elements. This tendency towards traditional techniques is related with authenticity in workmanship.

Combination of both new and traditional methods is obvious in joining fragments of ancient or new stone members. Generally, diverse solutions are adopted in different cases, depending on technological advances at the time of implementation. Despite questions on the price of titanium (CCEM 1987a, 27, 85, 93), cement mortar together with titanium rods are used in this anastylosis, as in the Acropolis monuments. Joints made of wood will also be utilised, as in antiquity, in their original positions – fixings in Π shape. Yet, this was doubted because the existing fixings are broken (CCEM 1987a, 10, 44). Consequently, although ancient methods and techniques are preferred, practical problems may undermine their implementation.

Respect for the valid contributions of all periods, in accordance with Article 11 of the charter, is shown by not intervening on the post-Roman phases and the Baths of the
Asklepios (Maurommatidis 1987a, 21-25). Related to that is the issue of the stone benches originally placed in the ground floor stoa, but found in second usage in the Sanctuary of the Egyptians. The originals will be kept in their second usage, whilst copies will be placed in their original location (see Maurommatidis 1987b, 27-31; CCEM 1988b, 4-7). Specific reasoning possibly justifies this particular choice, but it is not presented in the anastylosis study. However, there are already three benches surviving in situ in the Avaton. Production of copies of the rest of them is not necessary, as it will actually multiply the amount of new material incorporated into the building. A compromise could be found by conserving the ones existing in situ and providing further information about their function and later usage. That would easily provide both visitors and professionals with visual information of the original form of this part of the monument.

This phenomenon is quite common in classical monuments in Greece. In the past, ancient monuments were dismantled to utilise their architectural elements as building materials in later constructions. This creates ethical problems for those who undertake anastylosis. Usually, they are not returned to their original position, because to detach them ‘would be violation of the later history of the monument’ (Bouras in CCEM 1987a, 92). Furthermore, in the sanctuary of Asklepios, a substantial amount of members from various monuments is incorporated into a Roman wall. No definite decisions have been made yet and the committee lingers between the ‘historic values of the Roman wall’ and the ‘artistic values of the embodied architectural elements’ (CCEM 1987a, 6). The answer will only be found by assessing the values of the monument and the site, so that decisions can be made. As far as the Avaton is concerned, there is no presentation or assessment of its values; values were merely implied when the intervention works were described.

In accordance with Article 15 which endorses anastylosis as re-assembly of original but dismembered parts, the restorer underlines that surviving members are assembled in original or matching locations. This forms a quite interesting issue of anastylosis, which has already been discussed in the Erechtheion.

Exhaustive documentation and publication of the monument is touched upon by Article 16 (Maurommatidis 1987a, 21-25). The final publication awaits completion
of the works. The available documentation comprises of the anastylosis proposal (CCEM 1987b) and its revised version (CCEM 1988b), publications about the site and of the proceedings of the international conferences. It serves the need for dissemination of information and for documenting and publicising the undertaken interventions. However, the third proposal, outlined after further architectural elements were found, was not publicly available, and information was found accidentally from a paper. This certainly does not ensure professional approaches.

However, within the proposal (CCEM 1987b), limited information on the amounts of original material and the new material to be integrated on the monument is presented. The person interested needs to consider the monument from plans and photographs and then surmise how much material will be used. This is not only a personal observation; most professionals participating in the international conference (see CCEM 1987a) consent to the provision of detailed and thorough information.

Remarkably, a suggestion for creating anastylosis archives (Coulton in CCEM 1987a, 38) was not exactly welcomed by a committee member, who argued that 'it will not be beneficial to future researchers, due to the frequently bad state of preservation of photographs and earlier publications' (Bouras in CCEM 1987a, 97). The preservation of archives is a crucial issue because of their significance for future research and for the desirable transparency of the works. If an archive in bad state cannot provide researchers with sufficient information, then why not work towards preservation and the care of its collections?

Further principles followed in the Avaton anastylosis, regard respect for the structural system, mainly preservation of the autonomy of the architectural members and their static sufficiency due to their weight, as well as self-protection of the monument by following the original structural system (Maurommatidis 1987a, 25). Accordingly, emphasis is placed in joints not being too strong, so they can stand dynamic strains without transferring them and their mechanical overcharge to the stone. This was decided because it was preferable to have joints broke rather than members and for protecting the archaeological values and the structural stability of the monument (CCEM 1987a, 35 and 77). The above technical matter is quite
common in many anastylosis projects and in accordance with Starosta's research on issues of structural stability in anastylosis projects throughout time (see Chapter 3).

Among the additional principles guiding the works is reversibility (Maurommatidis 1987a, 25), ensured by 'technical experience and assistance by science and technology' (Zambas in CCEM 1987a, 78). Yet, the usual questions on its definition and attainability are raised. In the Avaton, the bad state of preservation of original material requires drastic protective measures and it will be difficult to detach integrated elements from the original blocks (see Giraud in CCEM 1987a, 43). This observation is certainly right. The issue has been quite extensively discussed with regard to the Parthenon and the Erechtheion anastylosis projects.

4.2.1.2.3 Issues arising from the project

It is quite hard to judge whether the undertaken works correspond to the proposals. The following observations are based on my last visit to the monument in summer 2002. The walls were being conserved and their members re-assembled (figs. 76c, d); the east side was under conservation (figs. 76a, b); the Ionic colonnade, the ground floor pillar colonnade, the staircase, and the lower parts of the building were already restored (figs. 79b, 80b); anastylosis of the external colonnade and of the Roman buttress was in progress. The pending works involve: the limestone benches, the sacred well, the parapets of the upper colonnade, the natural ground, and the wooden beams.

According to descriptions of the state of preservation of the Avaton, the excavation sections and the clearings, and the later discoveries of further original material, the quantity of surviving material seems to justify the choice of anastylosis as re-assembly of existing but dismembered parts of the monument. Photographs of the monument before the current anastylosis (figs. 79a, 80a) indicate that plenty of material that could be re-assembled on the building existed.

Anastylosis was also chosen in order to tackle the destructive effects of natural phenomena and visitor wear (see Maurommatidis 1987b, 26-32). Visitors walking around ruins contribute to the deterioration of the monument. Extensive research was conducted for the conservation of the surviving porous stone, seeking a harmless
compatible material to be applied to original elements and protect them from
dampness and physical deterioration. Anastylosis will result in structural parts being
reincorporated in the building and protecting each other with their weight. They will
not lay dispersed on the ground anymore. However, the proposal for reconstructing
the wooden beams of the ground floor of the upper stoa (see Maurommatidis 1987b,
27-31) contrasts the declaration by the restorer himself (Maurommatidis 1987a, 24)
that the anastylosis does not proceed in reconstruction work. New wooden beams
may be incorporated because they are known from historical and archaeological
sources while the fact that wood was certainly known as the original building
material does not necessarily justify the argument either.

Despite the contrasting nature of these statements, it becomes apparent that some
reconstruction work may be included in anastylosis. Thus, it can be concluded that
anastylosis forms an architectural conservation method, which comprises actions
with different objectives and features that can also be implemented separately.
Furthermore, it is viewed as an intervention undertaken for various theoretical
(legibility, education, preservation) and technical (structural stability, protection)
reasons. While in the Greek context the term is used as an alternative to any kind of
restoration, it is the actual re-assembly of dispersed original material that defines the
practice. Given that surviving members of the Avaton are reintegrated on the
monument, it should be acknowledged that anastylosis is implemented according to
international standards and definitions.

However, it is not clear whether additions and completions are the minimum
possible. In the anastylosis study (CCEM 1987b), the surviving members and how
many of them will be re-assembled are analytically presented, but their quantity is
not clear. Careful observation of the monument, in relation to the description of the
works, reveals that the intervention seems quite extensive (figs. 77a, 81). Despite
constant statements by the restorer about the minimum use of new material and less
possible interventions, new material appears to be used in great amounts. In this
regard, the possible establishment of amounts of original and acceptable new
material in anastylosis becomes an issue to be further discussed. Restorers view it as
a matter of common sense. Establishment of percentages of material forms a
prerequisite for lucid proposals, as it addresses demands for scholarly presentation of
anastylosis works. Most importantly, it would provide limits in anastylosis, since the amount of integrated new material seems to differentiate anastylosis from reconstruction and is often justified by the aims of the intervention.

In addition, the restorer specifies that the difference between anastylosis and reconstruction depends on the analogy between each completion and the total extent and volume of the building, as well as the size of the archaeological site (Maurommatidis 1987a, 24). This seems to be a quite radical assumption. Archaeological sites have variable sizes and to compare the form of the completed monument to the entire site, would allow extensive interventions and reconstructions. This is not the desired result, according to the latest theories about how to respectfully care for our heritage. The size of the Avaton and the site of Epidaurus is substantial, thus, additions and completions will seem insignificant. Consequently, questions on the permissible extent of this anastylosis emerge once again.

As far as authenticity is concerned, since the works have not finished yet, definite conclusions cannot be drawn. Observations can be made, such as the tendency to employ traditional techniques, due to respect for authenticity in workmanship. Authenticity issues are mainly reflected in the original material of the Avaton and the protective and conservative measures undertaken for its preservation. As Bouras sustains (in CCEM 1987a, 99) in the Western world there is ‘fetishism towards the ancient material’ when it comes to restoration.

Furthermore, it is quite hard to judge the end result from an aesthetics point of view, although the majority of the conference participants disapproved the omission of speculation on aesthetics and the lack of philosophical questioning in this anastylosis. The proposal emphasises technical problems, without analysing in-depth the philosophy or discussing the theoretical framework governing the interventions. Yet, the committee argues that ‘the person who intervenes with the monuments should not experience them romantically, but cognitively’ (Lambrinoudakis in CCEM 1987a, 84) and that ‘freeing ourselves from philosophical confusion, we will soon find solutions, because technical solutions can be found sooner or later’ (Korres in CCEM 1987a, 59-60). However, they do provide interpretation of the articles of the Venice Charter that apply to their proposed actions. Besides, as it has been
shown so far, technical matters are strongly related with the theoretical principles of
the intervention. The importance of looking at all problems concerned with
anastylosis under the prism of theory should be recognised. In this regard, Giraud (in
CCEM 1987a, 474-478) suggests that ‘Greek professionals should elaborate a
theoretical framework including commonly accepted rules and aims for appropriate
anastylosis interventions in archaeological monuments’. This suggestion highlights
the significance of theory and philosophy in monument preservation and of a lucidly
articulated framework in which anastylosis is undertaken.

Epidaurus has been inscribed to the World Heritage List since 1988. It is an
enormous site with a significant and long history. Its conservation and management
have surely been decided and outlined according to a management plan.
Interventions and other actions are planned and implemented to major monuments
and the site itself (figs. 72-75, 85c), together with provisions for visitor accessibility
and publications disseminating information to the wider public. Yet, the plan is
neither available nor widely publicised.

Public involvement in anastylosis decisions and planning is referred to only in
discussions, but does not happen in practice. To the question about whether ruined
monuments should be restored or left alone, Zambas states that ‘experts cannot and
should not be the only ones to provide answers’ (in CCEM 1987a, 78-79). The
opinion of the public, including the technicians and stonemasons, should be
examined. This view has not been previously expressed in the context of Greek
monuments. Interventions have been and are undertaken with ideas of national and
cultural identity, social use, and tourism in mind, but the public are unaware of
decisions made for their sake. Furthermore, not much information is available on site
for the public, apart from the basic information on the monuments and the stone
inscription about the site being in the World Heritage List (fig. 71).

The advantages of this anastylosis are found exactly on the aims that it seeks to
achieve (conservation and improvement of the legibility of the monument, together
with elevation of the site) and its disadvantages in extending the intervention and
proceeding with considerable amounts of new material.
4.2.2 The Propylon of the Gymnasium Complex

The complex, dated in the 3rd century BC, consisted of the Gymnasium, the monumental Propylon, and the Roman Odeum, and is situated at the south part of the sanctuary (fig. 70). The Propylon was a formal decorative entrance, a prostyle building with a Doric colonnade at the north. At the east and west, walls connected it to the Gymnasium.

The Propylon was revealed in 1884 (fig. 85a, b) but until 1984, no measures for its protection were undertaken. Its appearance resulted from sequential additions to the initial building, destructions, and loottings. Original material, either dispersed or surviving in situ, was exposed on the ground since the first excavations. Further deterioration was caused by time, weather conditions, and visitors. The foundation, part of the paved floor with the podium levels and the ramp were preserved but the mud-brick superstructure did not survive.

4.2.2.1 The anastylosis programme

Detailed documentation and systematic study of the preserved material were conducted in parallel with architectural clearings (fig. 87) and excavation works, which revealed numerous members, most of which survived intact. Their state of preservation and the possibility of restoring them were assessed. A programme for conservation of limestone parts is current conducted and includes photographic and graphic documentation of members, before and after conservation and re-assembly. The process is supported by thorough bibliographical research. Restoration work resets intact surviving blocks to their original positions, constructs completions for broken members in initial or similar positions, and completes missing parts with new ones (figs. 92, 93). Natural stone, selected through research programs and laboratory experiments (fig. 84), is used for production of new members and re-integrations. Other research programmes are involved with producing mortars for protecting the soft porous stones, cleansing members, and joining them. Anastylosis comprises assembly of members or fragments (fig. 88), with joining mortar for small fragments and internal reinforcement with titanium for larger ones. If it is not necessary, fragments stay unconnected in case more elements that can be re-assembled are found in the future (CCEM 1994, 7-8; Danali-Giole 1988, 36; Kyriaki 1988a, 163; 1988d, 8-11; 1988e, 48; 1999, 35-37).
The anastylosis (figs. 85c, 89) comprises restoration and anastylosis of the floor and the staircases of the podium, the euthynteria and the staircase (figs. 90, 94), the Doric colonnade (fig. 88), members of the walls (figs. 91, 95), and the Doric entablature. Members of significant architectural groups, including parts of the frieze and ionic architectural elements, will be exhibited in the museum (Kyriaki 1988a, 162).

4.2.2.2 Observations and discussion
In summer 2002, anastylosis works at the Propylon had not been finished, even though the restorers had initially stated that the works will have been completed by 1999. Yet, by 1999 the works were 90% completed (CCEM 1999). At the time of my visit to the site, the Propylon was still subjected to anastylosis, so no definite judgments can be made. It becomes particularly hard to assess whether the proposal is strictly followed and which parts of the structure are re-assembled and which are not. An attempt to assess the situation resulted in identifying that the floor and the staircases of the podium, as well as the euthynteria and the staircase were restored; anastylosis of members of the walls was still in progress; and works had just started in the Doric colonnade and entablature.

4.2.2.2.1 Analysis of objectives, and whether or not they were met
Re-assembly of the superstructure will result in protecting exposed surfaces (fig. 86). The principal aspiration becomes the arrest of deterioration, since the creation of a core of durable materials will protect the re-assembled members (Kyriaki 1988a, 160-162). Indeed, the members, especially those less durable, are subjected to further conservation treatments before re-assembly; hence, their deterioration is arrested. By integrating them back to the building, their exposed surfaces are protected. As noted in the Avaton, anastylosis may necessitate or be combined with conservation. This, in turn, highlights the fact that anastylosis is an intervention that may not be undertaken in itself, but as an action implemented within a wider framework of monument protection and preservation.

Anastylosis also aims at indicating the initial form of the building (Kyriaki 1988a, 160-162). Re-assembly of existing members with introduction of new material will
certainly indicate the initial form of the monument. This is gradually becoming apparent.

Generally, it seems that the objectives of the restorers will be fulfilled. However, the reasons and aims of the anastylosis are not analysed. Despite being established in the general introduction, there is no further reference to them. The extent of work is simply described, in contrast to the Avaton, where each integration and re-assembly is explained in detail in relation to the aim sought to be achieved.

4.2.2.2 Theoretical framework of the anastylosis works

The methodology of the restorers is based on the *Venice Charter* and the additional principles adopted in every anastylosis of classical monuments in Greece (Kyriaki 1988a, 160-161). Some principles of the charter are not mentioned at all, though they apply through the multidisciplinary synthesis of the committee, the working teams, and the instigation of international conferences. Other principles respected, but not mentioned as such, are the preservation of the monument as a historic testimony, the care for the traditional setting, the use of both new and traditional techniques, and the respect for the valid contributions of all periods. The latter is reflected in the attempt to balance the classical and Roman phases of the Gymnasium. The Propylon belongs to the classical period, whilst the Odeum is a Roman addition. The approach attempts to balance both types of heritage. However, certain caution should be exercised since, in general, more attention is paid towards preservation of the classical heritage. Preservation of the monument as a historic testimony is reflected in its exceptional artistic and historic values, which influenced the architectural history.

Regarding the preservation of the traditional setting, it should be pointed out that the Propylon forms part of the wider monumental complex of the Gymnasium (Kyriaki 1988a, 160-161). Further anastylosis works are planned for the Refectory and the Odeum (both being parts of the Gymnasium). Hence, the Propylon is not going to impose on the rest of the ruin. In addition, anastylosis projects are currently implemented in the Avaton and the Tholos (figs. 73, 79, 80) and dispersed members not re-assembled on the Propylon will be removed for their protection in warehouses. Hence, the monument will not dominate in the archaeological site. The sanctuary of
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Asklepios will consist of partially restored buildings, which will indicate its image as it was in antiquity.

The issue of the interrelation of educational and social values, as perceived through the free interpretation of Article 5 of the charter (see Kyriaki 1988a, 161) emerges once again (see Acropolis monuments and Avaton). Yet, there are different arguments, such as Linstrum's (in CCEM 1988a, 25), who associates the promotion of the educational value of the monument with the financial benefit from increased visitor numbers. This is a quite sensitive issue that certainly influences decisions on restoration and anastylosis, whether strongly or partially, but it is never admitted as such. This matter also depends on who provides the financial resources and how much they can have an impact on the decision-making.

Educational values are interrelated with academic values. As Linstrum highlights, academic values can be highlighted by reconstruction drawings while, according to Schwander, educational ones are better achieved by partial anastylosis and restoration (both in CCEM 1988a, 24 and 31). However, the fine line between enhancing educational values within the context of anastylosis and projecting them to justify its extent should be acknowledged. Education can be achieved with a combination of means – reconstruction drawings, small-scale models, videos and diagrams, explanatory material such as signs around the site, even organisation of ruins in low height and experimental archaeology (see CEEM 1988a, 21-46) – so it is not necessary to proceed with extreme measures to fulfill certain aims. The best approach is the one that considers all factors and chooses the middle road, using a combination of means.

Principles reflected in Articles 9, 12, 15 of the charter refer to the respect for original material and re-assembly in original locations, the use of a pantograph to achieve faithful copying, and the differentiation of members (Kyriaki 1988a, 160-161). Concerning the latter, the situation is similar to the Avaton, as the adopted solutions are the different sculpting of new members and the inscription of the intervention date in non-visible surfaces. Matters of respect for original material and the use of both new and traditional tools and techniques have been previously discussed with regard to the Avaton anastylosis.
Article 16 discussing documentation and publications is respected in various ways (Kyriaki 1988a, 160-161). The anastylosis proposal (CCEM 1988c) and the proceedings of the international conference (CCEM 1988a) have been published and are available in academic libraries. An appraisal of the published proposal should take place, as it provides extensive information on the undertaken archaeological and architectural research and on the structure and construction of the building. It is also full of bibliographical references and comparative examinations and studies of other similar architectural and structural examples. The result is a thorough and informative investigation, which clarifies questions about how the intervention will establish the form of the monument.

However, the actual description of the proposed anastylosis occupies a small part of the extensive architectural and archaeological study, having an almost a supplementary role. It covers technical issues but there are not many references to the theoretical aspects of this anastylosis, with the exception of the presentation of the principles of the *Venice Charter* that are followed. Another significant point made in the conference (CCEM 1988a) suggested the chronological division of the two studies – the archaeological/architectural and the anastylosis one – so that experts and those interested have the time to examine them and comment upon them. Professionals have often pinpointed, quite accurately, the lack of time in discussing the architecture of the monument and then converse on its proposed restoration.

In general, the quality of documentation before and during the intervention is exceptional. To assess the documentation after anastylosis is not possible yet, since the works are still in progress. The only further observation that needs to be made is the suggestion, by Hoepfner (in CCEM 1988a, 20), to publish the study of the monument in other languages, for instance in English, so that a wider audience can access it. However, whilst his suggestion was welcomed by the committee and was emphasised with the creation of a widely available archive with all documentation available, its realisation is pending.

Further principles respected in anastylosis projects in Greece, especially reversibility and self-sufficiency of the structural system (Kyriaki 1988a, 160), are simply
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mentioned in the theoretical framework. Respect for reversibility is reflected in not connecting, if not structurally necessary, fragments and completions of missing parts, in case original fragments are found in the future. This raises the same question already discussed in the anastylosis of the monuments examined so far, with regard to when such an action would be deemed necessary. The principle of reversibility is also reflected in the use of pantograph, an apparatus which transfers the texture of connecting surfaces. So, if a member or fragment needs to be removed, there will be no damage to the original part. This action indicates that, despite the relativity of principles, certain actions can contribute to their attainability in practice. For instance, resolution of technical problematic matters is largely based in the principle of respect for original material. Furthermore, the self-sufficiency of the structural system is not only a technical aspect, but it is also related to preserving the authenticity of the structure and its design, as already noted in previous case studies.

Nevertheless, a comment made by the restorer of the Propylon should be further analysed. Kyriaki (1988a, 160) admits that there is an 'effort' to follow the theoretical principles. This statement might imply a willingness to justify possible mistakes and extensive works and/or a difficulty in applying the principles of the charter in practice. A relatively free interpretation of the Venice Charter leaves freedom to the restorer who undertakes the anastylosis. This is recognised and accepted in the architectural conservation field and it is also identified in the context of anastylosis of classical monuments in Greece.

4.2.2.2.3 Issues arising from the project

For the conservation and management of the entire site, the same comments made with regard to the Avaton apply here too. Additionally, it should be noted that further architectural members belonging to the Propylon were discovered during the anastylosis. That led to a renewed proposal (see Kyriaki 1999, 37-38), as in the Avaton. Hence, although protection of structural and architectural members necessitates conservation and anastylosis, a more thorough approach, in order to recover further surviving elements, could delay anastylosis. The emerging question relates to establishing when excavation should stop and conservation and presentation of a monument initiate. In this regard, conservation treatments and
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temporary protection measures will extend the timeframe during which additional original members can be retrieved.

Furthermore, after the works had started, there was still ambiguity regarding the interpretation of the Gymnasium complex (see CCEM 1988a). Archaeological excavations were limited to trial sections and clearings of the site and resulted in locating more members and clarifying architectural and archaeological questions. Since, there was still ambiguity regarding some issues, excavations should have probably been more extended. However, this is where the question of efficiently managing and conserving a site and its monuments emerges. The possibility of locating further structural and architectural elements is always present in an archaeological site, such as Epidauros, where excavations are carried out every year. Hence, there should be more clearly-phrased planning of alternative solutions and actions if a new discovery would alter the decided and applied anastylosis. These issues should have been addressed in a management plan.

In addition, the management plan should have attended to the general image of the sanctuary after all anastylosis and restoration programs are completed. This issue surfaced during the conference on the Propylon anastylosis (see Dimacopoulos in CCEM 1988a, 15-16) and should certainly be a prerequisite in heritage conservation and management. Future planning and maintenance of a site or a monument are equally significant to decision-making and implementation. In Epidauros, the final form of the restored monuments, their interaction within the site, and their future maintenance are issues entirely absent from any published studies or sources. Surely, this discounts not only basic conditions in heritage management and conservation but also the declared respect for the monuments and their setting.

Another matter concerns the absence of information to the public during their visit to the site. At the time of my visit (summer 2002) not much information was accessible to visitors, apart from a couple of leaflets and signs dispersed around the monuments. Anyone interested in a more detailed interpretation and presentation of the sanctuary and the monument would need to do some research before their visit, as there are excellent publications with plenty of photographic material addressed to the interested public. However, the restorer confirms that there will be interpretative
material to inform visitors and aid the legibility of the site (see Kyriaki 1988d, 11-12). Apparently, these will be realised after completion of the anastylosis; yet, the importance of their availability during implementation of the works seems to be underestimated.

In addition, the non-inclusion of the stakeholders in the process of decision-making and implementation was admitted by the committee during the conference. Interestingly, a professional disclosed that visitor surveys have never been conducted in the context of classical monuments in Greece (see Bouras in CCEM 1988a, 46-47). Educational values and didactic aims are projected as essential objectives of anastylosis, but no progress is made as to consulting the people that the professionals want to educate. The fundamental question evolves around the meaning of deciding anastylosis in absentia of those interested. This fact is only lately being acknowledged but, hopefully, it will lead to actually resolving the matter.

A remarkable suggestion during the conference referred to the conduct of a specialised conference on the social aspects of anastylosis of monuments in Greece and how restoration professionals should respond to that (see Bouras in CCEM 1988a, 47). This proposition implies the impact of anastylosis on society and, in turn, the recognition of multiple values to be taken into consideration in decision-making. In an era that heritage conservation and management are oriented towards respect for the values represented by monuments and the ways in which they can be enhanced and respected without conflicts, the Propylon forms another example in which values are only selectively respected and there is no analysis of or reference to their entirety.

Similarly to the Avaton, the Propylon anastylosis is also studied, prepared and planned by following solutions proposed by research programs undertaken at the Stone Centre of Greece. These regard the possible production of artificial stone, the determination of quarries suitable for quarrying natural stones similar and compatible to the originals, the creation of a protective plaster for surfaces, similar to the one used in the past, and plans for cleaning stones (see Kyriaki 1988d, 8-10). This exceptional approach indicates another level of respect for the original material and the structure. At the same time, the anastylosis proposal is based on extensive
archaeological and architectural study of the building, addressing questions of date and use of its material, as well as of its construction and architecture.

Another technical aspect concerns the proportion of new and original material. The amount of surviving material is quite low. Original members survive in less than 50%, especially in the superstructure, while the substructure survives in greater extent. Besides, architectural members of particular importance that have a special location in the building will not be used in the anastylosis but will be exhibited in the museum instead (see Kyriaki 1988d, 11-12). However, this does not justify anastylosis as ‘re-assembly of existing but dispersed members’ (ICOMOS 1964). Given that the new material required for their replacement will be extensive, the definition of this intervention should probably be re-examined.

In addition, it should be noted that throughout the proposal the terms restoration and anastylosis are used interchangeably. As a consequence, either these two interventions are not differentiated or restoration may involve anastylosis work and vice versa. Hence, it becomes exceptionally difficult to understand each type of intervention and how it differentiates from each other. The only certain assumption that can be made is that each intervention may involve actions that could be described as conservation, restoration, even reconstruction – a relevant discussion concerned the use of a mobile in order to protect the monument against the winter conditions, particularly the rain (Hoepfner in CCEM 1988a, 21; Gruben in CCEM 1988a, 22).

Interestingly, the amount of surviving material is provided in numbers, in contrary to the practice for the Avaton, where no percentages of original material are given. These percentages rarely refer to what they represent, except for a few cases where it was clarified that they represented surface or amount of material. This brings up the issue of whether the amount of surviving material can be measured without assessing the condition of the fragments (see Dimacopoulos in CCEM 1988a, 18).

Additionally, in this case, there is not much discussion about authenticity, even though the undertaken actions are similar to all those examined so far and which, one way or another, are related to authenticity.
Generally, the advantages of the undertaken anastylosis are found in: achieving the protection and structural sufficiency of the monument; resolving technical and theoretical matters through multidisciplinary approaches; enhancing educational and social values; improving the legibility of the monument, and extensively researching its archaeology and architecture. Disadvantages are the lack of concrete ideas about how the restored monument will be integrated into the site and about the incorporation of new material. The theoretical and technical framework of the anastylosis is not given much gravity either, in comparison to the architectural study, while not much effort is put towards informing and involving the public.

4.3 The Hellenistic Stoa at the Acropolis of Lindos, Rhodes

4.3.1 The Hellenistic Stoa
The Hellenistic Stoa (3rd century BC) of the Acropolis of Lindos (figs. 96-100) is a Π-shaped Doric stoa (fig. 102). It consists of two covered wings which flank the staircase of the Propylaeum (figs. 99, 102). In 1914 completion of columns and consolidation works were undertaken (fig. 103). In the 1930's dispersed members were re-assembled with reinforced concrete (figs. 104, 105, 106a, 107a, 108a, 109). In 1993 research and restoration initiated by a scientific committee (CCAMAL). Deterioration of the ancient material from the sea environment, as well as from the unfortunate methodology and the inappropriate material of the past anastylosis was obvious. Oxidation of steel joints had caused expansion and cracking of the concrete and the stones (fig. 111). The original static system had been neglected, rendering its behaviour in wind or earthquake unpredictable (fig. 110). Large parts of the foundations survived, while column drums and elements from the walls were found in situ. The back wall of the west and north wings and the two separating walls of the wings were preserved. The side walls and the east back wall survived partially.

4.3.1.1 The anastylosis programme
Infrastructure works relate to: organisation of the work-sites (figs. 115, 116); consolidation of the underground vaults and organisation of exhibited non-assembled members in them (figs. 117, 145, 147); geological exploration to locate quarries for
extracting porous stone for completions; engineering geological studies on the
durability of the stones and the slope; studies for the production of mortars (fig. 118);
and architectural research, including studies on the column shafts (Kazilis and Dalias

Interventions are extended only on the parts previously restored, especially the
colonnade. Dismantling of columns and cleaning of ancient members (fig. 119) is
followed by treatment, though some previous completions remain. The feasibility of
replacing them with new sandstone and returning them to their original or matching
locations (fig. 121) is assessed. Fragmentary ancient parts, which do not preserve
their original volume and cannot sustain much load, are drawn, photographed and
kept in storage. They are replaced by freshly quarried sandstone. Plaster-casts are
made and then, using a pantograph, the points of ruptured surfaces are transferred to
new stones, making them exact copies of missing or removed ones. Ancient
members not belonging to the monument are removed, while members found in
incorrect locations are transferred to correct ones, if possible. Connecting original
members and new material is achieved with titanium or bronze rods and mortar (fig.
120), produced and tested through laboratory experiments. The mortar, poor in
concrete but with earth and lime, is strictly limited around the rods and is not
exposed to the environment (Eleftheriou 2002a, 115; 2002d, 107-109; 2002f, 110-
111; Filimonos-Tsapotou and Eleftheriou 2000, 3; Pakkanen 1988a, 110; Pikoula
2002b, 161-165; Pikoula and Papadimitriou 2002a, 166-171; 2002b, 144-147).

The anastylosis programme is conducted in two stages. The first one consisted of
restoration of the transverse colonnade. During that, new data derived, according to
which a new anastylosis proposal was formed. Accordingly, six intervention stages
were planned (figs. 104-108, 123, 129-132). These involve columns of the free
colonnade, the east corner and the west wing. By 2000 the first four projects were
complete (figs. 112-114, 124-128, 130, 131). Work will continue after restoration of
the temple of Athena and is planned to be concluded in 2008 (Eleftheriou 2002a,
115-140; 2002e, 112-113; Filimonos-Tsapotou and Eleftheriou 2000, 4; Pikoula
2002a, 193-204).
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Encountered problems concerned efforts to improve the structural method of assembling column drums; protection of external surfaces; impossibility of researching all available material; and extensive use of new material (Eleftheriou 2002b, 173-180).

4.3.1.2 Observations and discussion
This anastylosis programme initiated in 1993 and has not finished yet. Only the first stage was completed in 2000. Any comments are only indicative of the entire anastylosis and some questions may be answered after completion of the programme.

4.4.1.2.1 Analysis of objectives, and whether or not they were met
The primary reason was the urgent need for intervention after the past anastylosis that caused rapid decay of the monument. It aimed at pausing further deterioration and restoring the static resistance of the structure (figs. 137, 137) (Eleftheriou 2002d, 107; Zervoudaki 2002, 5). Causes of deterioration are dealt with as the monument was dismantled, its members were conserved, and then re-assembled again. Removal of inappropriate material of the past anastylosis ensures that the structure will not suffer anymore from its harmful effects. Conservation of deteriorated members attempts to stop their dilapidation from the sea environment. The original monolithic static system was altered in the 1930's and the need for anastylosis was identified after a column collapsed in 1975 (fig. 110). The static sufficiency of the monument is restored, by making the structure stable against earthquakes – the Stoa is located in a seismic zone.

It is quite difficult to judge whether conservation is successful and whether deterioration has indeed stopped but the description of the undertaken actions shows achievement of this aim. It is, thus, once again proven that anastylosis is not undertaken as an action in itself, but in combination with conservation and stabilisation actions.

Morphological restitution aims at elevating the monument and the site and enhancing the artistic, historical, and scientific values of the monument, related to its architectural synthesis (Eleftheriou 2002d, 107). This seems to have been achieved, even though the works have not been completed. The exceptional architectural,
artistic and archaeological values of the monument are shown in a better light. The restored monument is located within a larger archaeological setting and enhancement of its form integrates it harmoniously into the imposing site.

Preservation of the image of the Hellenistic period, as established in the memory of people, is a significant objective sought to be achieved with anastylosis of the Stoa and other monuments of the site (Zervoudaki 2002, 5). Preservation of the form of the monument is combined with the limited possibility of re-using ancient material (fig. 143) (Eleftheriou 2002d, 107-108). This approach attempted to fulfil the requirement for preserving historical phases, while correcting the mistakes of past interventions and re-assembling original material that is too weak and deteriorated to be utilised. It forms an extraordinary attempt, though it is a strenuous objective to achieve, as not all errors can be corrected and the practical impossibility of researching all available material impedes this effort even more.

Interestingly, the reasons for implementing anastylosis refer to technical aspects only, mainly the need to rescue the structure and the building material from further deterioration. They are clearly differentiated from the aims which have a much more theoretical background, such as preservation of the monument for the future and enhancement of its artistic, historical, and scientific values. In general, we could conclude that the objectives of the restorers are met or that they will probably be met after completion of all planned interventions.

4.3.1.2.2 Theoretical framework of the anastylosis works

The theoretical framework of the anastylosis is based on the Venice Charter and those principles followed in the context of Greek classical monuments (Eleftheriou 2002d, 107-110; Pikoula and Papadimitriou 2002a, 171). However, it was stated that the theoretical framework was determined by the problems presented in the monument and the results of previous interventions (see Eleftheriou 2002d, 107-108). This becomes the case in every monument that has been previously restored. Theories and principles may require a more flexible approach or adaptation to the specific needs of the monument. In this regard, it is also admitted that these principles are viewed with certain flexibility, an issue related to the interpretation of
principles, as it has also been noted in the anastylosis of the Erechtheion and the Parthenon.

The anastylosis methodology in its technical agenda comprises of a wide variety of studies. Extensive archaeological and architectural research was conducted in order to determine the date, history, and architectural characteristics of the Stoa. Such studies are evidently essential when implementing anastylosis. Here, the undertaken study is impressive, since it has to take into account the incomplete records of the Italian expedition. It explains the architecture of the monument and its features (see Eleftheriou, 20002g), particularly the ancient connecting joints and how they are utilised in the current works. Research on joining and re-assembling members during the past restoration identifies mistakes and assists in finding the best possible solutions (see Pikoula and Papadimitriou 2002b). Further studies take place too, including engineering, geological, and structural ones, as well as extensive laboratory research. This thorough methodology is noted in recent projects, guaranteeing a multidisciplinary approach, which is also noted in the synthesis of CCAMAL, according to the interpretation of Article 2 of the Venice Charter.

Enhancement of the historic, artistic and scientific values of the monument, a principal aim of the anastylosis, is actually in accordance with Article 3 of the charter. The Stoa has a long history and is an impressive example of Hellenistic architecture. The site has artistic and historical values, being an important place of Rhodes and consisting of monuments from prehistory until the recent times. Its scientific values are included in its historic and artistic ones, as information is extracted through research studies. However, the monument has plenty more values, such as educational, discussed further down; archaeological, which have not been mentioned but are obviously included in the scientific ones; social and cultural ones, in the sense of their importance to the people of Lindos, of Rhodes, of Greece and internationally too, which are also not discussed at all. Hence, the significance of monument is multilateral. Unfortunately, in the Stoa, there is no analysis or discussion of values, just a simple reference to them and their enhancement with anastylosis.
Provisions about elevation of the site (emerged in parallel to elevation of its monuments and in accordance with the principle of respect for the surroundings of the monument), follow Article 6 of the charter (Eleftheriou 2002d, 107-110; Pikoula and Papadimitriou 2002a, 171) Restoration and anastylosis are currently implemented in other Acropolis monuments, such as the Temple of Athena (fig. 101). Most of them are primarily dictated by stability problems. However, they also aim at enhancing the values of those monuments and the site, as in most cases, the values of a monument may correspond to the values of other structures within its setting, while the values of a site are enhanced through its restored monuments.

Respect towards the ancient material is indirectly endorsed in this anastylosis. In the contrary, it did not form a theoretical principle to be applied in the 1930's anastylosis. For instance, structural and architectural elements were randomly assembled and sculpted, so that new parts could be adjusted to them (fig. 119).

The choice of natural stone for completions and additions to original members is decided after laboratory experiments and researchers on quarries, in accordance to Article 10 of the charter (Eleftheriou 2002d, 107-110; Pikoula and Papadimitriou 2002a, 171). The choice of the most appropriate natural stone is determined by various factors, from theoretical (respect for original fabric by selecting a compatible material) to technical and financial ones. Essential criteria are the physico-chemical and resistance features, as well as the achievement of harmonious integration of new and original material. Similarly, the connecting material utilised – titanium, bronze, and weak mortar (figs. 118, 120) – for integrations and original members, is chosen after laboratory experimentation, indicating too the seriousness with which the compatibility of new material is considered.

It should also be noted that in the 1930's the employed material was mainly reinforced concrete and mortar (fig. 111), as endorsed by the Athens Charter. No definite suggestions in this regard are made within the Venice Charter, which rather underlines the importance of ensuring the compatibility of the chosen material, leaving the restorers free to decide what would be best for the monument. New technologies – such as laboratory research and experimentation – are employed in the anastylosis of the Stoa in order to ensure successful conservation and re-assembly.
of members, as well as for reasons of respect towards the original material. The difference between the past and recent years is that new technologies are employed only after experimentation. For instance, these technologies lead to conclusions about the durability and the features of new material, something that in the past only the passage of time could tell. Therefore, new technology and its importance for anastylosis should be acknowledged.

Traditional methodologies are employed too, whenever possible, for reasons of respect for the ancient materials and the structural system. Combination of both new and ancient technologies is a significant aspect of anastylosis, as each one can cover diverse issues. Their choice, depending on the case, results in better-informed and respectful solutions. The same applies to new devices (for instance, the use of pantograph) and traditional tools (fig. 122).

Seismic activities in the area form a separate subject of study. The original structural system is followed (Eleftheriou 2002d, 107-110; Pikoula and Papadimitriou 2002a, 171), in contrast to the past anastylosis which altered it, ignoring the ancient connecting points and creating powerful connections for new and original members, leading to destruction of structural material. Maintenance of the individuality of each member and following of the ancient static system, guarantees the durability of the structure, as it was designed in antiquity. This approach is common in the recent anastylosis projects (see Starosta 1999) and derives from the latest restoration theories of respect towards material and construction, authenticity of structure, and after the lessons learned from the catastrophic examples of past anastylosis works.

Additionally, what is advocated in the Venice Charter as differentiation but harmonious co-existence of new and original material (Article 12) is followed here (Eleftheriou 2002d, 107-110; Pikoula and Papadimitriou 2002a, 171), through differentiation of colour and texture (figs. 134, 135, 141, 142). Whenever structural or architectural details cannot be decided, their restitution is not attempted, so as not to falsify the history and architecture of the monument. The effect of natural deterioration in the bright colour and texture of new members (figs. 138, 139), an issue extensively discussed in previous case studies, is examined too.
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Another aspect relates to respect for the latter additions to the monument, according to Article 11 of the charter (Eleftheriou 2002d, 107-110; Pikoula and Papadimitriou 2002a, 171). In the beginning of the 20th century, the Italian expedition, due to a preference for the Hellenistic period, led to the destruction of the later remains of the monument. Attention is paid to the Hellenistic buildings of the site and their preservation with respect to later additions, without any prejudice towards specific periods. It is also declared that the past restorations have historic values that should be preserved. The tendency is towards maintaining the form given to the monument by past interventions, rather than towards prioritising correction of morphological and other inaccuracies (see Eleftheriou 2002d, 109; Pikoula and Papadimitriou 2002a, 171). This forms an adaptation of the specific article that should always be taken into consideration when restoring monuments that have been subjected to interventions in the past.

What shows the importance of accurately documenting interventions to a monument is that the contemporary restorers encountered many problems due to the lack of or incorrect documentation by previous scholars (see Eleftheriou 2002i, 41). Difficulties emerged in decisions regarding the dimensions of the building. The Danish expedition kept accurate records and extensively published their research (see Pakkanen 1998a, 147-171), which facilitated the work of the current restorers. Comprehensive documentation is essential after an intervention takes place, as scholars cannot turn back in time and study the monument. This is why the Venice Charter weight is given to the documentation and publication of restoration works. In the current anastylosis, extensive documentation became fundamental (Eleftheriou 2002d, 107-110; Pikoula and Papadimitriou 2002a, 171). Publication of the monument – including its history, architectural and archaeological study, study of past interventions, the anastylosis program, and a commentary and assessment of the implemented programs – and accompanied by a volume with drawings and photographs of the monument and the different stages of the works, is circulated among research institutions and university libraries, forming a starting point for relevant researchers. It is a fully informed publication that I appreciated for its clarity and for efficiently developing all topics.
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This publication describes past interventions on the Stoa and other buildings in the Acropolis, while evaluating and commenting on those activities and their subsequent results. The critique is objective as it outlines technical issues and faults and explains the actions according to the historical background. Significantly, it is acknowledged (see Eleftheriou 2002i, 41) that without the past mistakes, the current restoration philosophy and the technical approaches would not have advanced. This embraces the idea in that every restoration approach nowadays has evolved from past activities, even if incorrect or unfortunate, and the philosophical thought developed over time.

Furthermore, the committee assessed their interventions, emphasising technical problems. This indicates good practice, since the restorers exercise self-criticism, acknowledging problems and assessing solutions. CCAMAL also proposes its way of handling the anastylosis of the Stoa as an example for other previously restored monuments. This is the first case of publication that refers to problematic situations, giving an insight of possible problems that may be encountered when undertaking anastylosis. Certain aspects are clarified and examples are provided, making them known to the scientific public and providing the opportunity to experts to discuss the emerging issues. As theory is well-known and followed, the success of anastylosis projects depends on the problems presented because of the individual needs of each monument and circumstantial matters – either technical approaches, organisational matters, or application of theory in practice – that affect the implementation of the project and the ways in which these were resolved.

4.3.1.2.3 Issues arising from the project

The interventions have a clearly saving character, as they do not extend to the whole monument but only to its restored parts, especially the colonnades that present static problems (Eleftheriou 2002d, 107). This entails that anastylosis may also be considered as an intervention with a saving character. As shown in this case, it also includes conservation and structural restoration. For instance, application of plaster in both new and original parts (fig. 118), a practice quite common in antiquity and originally employed in the ancient Stoa too, is undertaken for reasons of protection against deterioration. Anastylosis has been chosen in order to halt the deterioration suffered by the monument and caused by both natural phenomena and human intervention.
In addition, structural and architectural members belonging to the building but which have not been re-integrated are stored in the vaults under the Stoa. Hence, anastylosis does not always entail re-assembly of all available members, if they cannot be identified or if they are in a state of preservation beyond repair. Thus, anastylosis can be regarded as a method that either encompasses every kind of intervention to a monument or that it is employed in combination with other interventions or non-interventions.

Notably, the 1930’s fragmentary anastylosis of the Stoa is praised by the current restorers (see Eleftheriou 2002i, 44) who recognise that the monument would not have been preserved otherwise. The current anastylosis follows the past one in that no intervention is planned, unless absolutely necessary, in parts not previously restored. The reasons are the lack of sufficient surviving material in those parts and the decision to implement anastylosis rather reconstruction, due to a preference towards a less interventive approach. This is significant as it implies that anastylosis is regarded a minor intervention.

Nevertheless, the above comments and the following of Article 15 of the *Venice Charter* – according to which reconstruction and introduction of new material are refuted (Eleftheriou 2002d, 107-110; Pikoula and Papadimitriou 2002a, 171) – come to contrast to what is claimed by Filimonos-Tsopotou and Eleftheriou (2000, 3). Specifically, they maintain that the process is more a reconstruction rather than restoration because only a small percentage of ancient material is re-used. Though it is interesting that some conclusions can be reached as to what anastylosis is considered to be, these exact conclusions are contradictory. By preferring a less interventive approach and, thus, choosing anastylosis, anastylosis becomes a minor intervention. Yet, the restricted amount of original material that is re-assembled makes the process a reconstruction. The only conclusion that can be reached is that anastylosis is considered as an intervention that requires the maximum re-assembly of original material, irrespectively of whether it is implemented as such or not.

It should also be underlined that the quantity of original material currently re-assembled on the monument is not clear (figs. 128-130, 132, 133, 135, 138). It seems
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that a great amount of new material is utilised, especially in the entablature and in a few columns. For instance, some columns seem to have been reconstructed only to re-assemble their original capitals. Moreover, studies of the Acropolis monuments, as confirmed by Filimonos-Tsopou and Eleftheriou (2000, 3), show that more original material was used in the past restoration or was found dispersed around the site but not all surviving material is currently reintegrated due to their deterioration. The restorers mention that the amount of new material utilised in order to re-assemble surviving members is quite large; hence, they do not consider the intervention as anastylosis but rather a reconstruction. This relates to whether the quantity of original and new material establishes the extent and, thus, defines the undertaken intervention. As a consequence, it could be worth exploring whether a specified amount of new and surviving material should be established in the framework of anastylosis. This issue, raised in almost every case, becomes even more complicated when the monument has been previously restored, i.e. the monuments of Acropolis of Athens, or if it survives in a bad state, i.e. the monuments of Epidauros.

Additionally, sufficient material survived before the anastylosis of the 1930’s, but it proved to require more new material than originally expected (see Eleftheriou 2002i, 42), therefore it was assembled in non-original locations, as that required fewer completions. This generates the question of whether members should be re-assembled in original or not locations. Generally, efforts focus upon assembling members in original locations and then, if these positions cannot be established, random assembly follows. The ideal situation would be to re-assemble all surviving members to their original locations without introducing more new material than what is absolutely necessary, as this ensure authenticity in design and form. If that is not feasible, then matching locations could be the next step, after examining the role of each member – evidently, they should be simple structural elements without particular features that, if assembled in non-original locations, will not falsify the form of the building. Thus, a certain degree of flexibility may have to be observed if it would result in employing more original material than otherwise possible.

Re-assembly of members in a bad state of preservation may also necessitate introduction of additional new material. It may also affect the structural stability of the building, as it could lead to strengthening joining points with further connecting
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material. Thus, the extent of intervention will increase and it will have an impact on
the authenticity of the monument and its material. Consequently, technical
examination and theoretical consideration is needed for deteriorated members and
fragments. Some material of the Stoa is quite deteriorated (figs. 138, 139). It would
seem preferable to integrate it in the structure, rather than letting it deteriorate further
on the ground or keeping it in a museum or warehouse. However, extensive
interventions for achieving its integration are not desirable; thus, everything should
be carefully considered without resorting to extreme choices.

A certain degree of difficulty is also presented when identifying original members
and their exact location in the monument and when re-assembling them, as its
restorer confirms (see Eleftheriou 2002d, 109). Therefore, extensive testing of
structural elements is carried out, a solution that forms the safest way of deciding
which members and fragments belong together, even though their heavy weight
makes it quite difficult. Such methods may become possible in the future through
virtual representations of members or fragments. These representations can recreate
structural elements in virtual reality and test their location on the building. Recently,
such technological advances are employed (see Sagalassos Nymphaeum) and,
hopefully, it will only be a matter of time before they become widely available. The
emerging issue is that is the proof that multidisciplinary approaches – such as
information technology – are necessary for ensuring successful anastylosis planning
and implementation.

Finally, what should be commented upon is the choice of integrating into the upper
structure architectural members extracted from recent buildings in which they are
found in second usage (see Eleftheriou 2002i, 35). In this case, the choice is
straightforward, as the structures from which they are extracted are quite recent, so
not many values are attached to them. This issue frequently surfaces, as shown in the
Avaton anastylosis. If a conflict of values emerges, thorough assessment of values
and the possibility of finding an acceptable compromise would offer the best
solution.

As far as establishing whether the proposed intervention is followed accurately, this
is difficult to assess. The anastylosis is not completed yet, some observations can be
made, but in practice any judgements cannot be as accurate as it is desirable. Generally, the image of the Stoa agrees with the description of the undertaken actions.

The Stoa is a monument that has been restored in the past and that should always be borne in mind when exploring the issues of the current anastylosis. The monument presents different needs and requires diverse operations for its safeguarding, as it is confirmed by its restorers (see Eleftheriou 2002d, 107-108). For instance, partial anastylosis and other interventions are only undertaken in its already restored parts, similarly to the monuments of the Athenian Acropolis. The technical actions are different and the theoretical framework has been developed depending on the problems presented by the monument. Additionally, considering the gap of time in the two projects, the noted different approach to theoretical and technical aspects of the works is conformed to the different attitudes of monument preservation during the past century.

Regarding the management of the archaeological site, no published documents account for its existence. Therefore, not much can be commented upon, apart from the fact that it is almost impossible to proceed with restoration programs, without having a general overview of the future of the site. Yet, no information indicates otherwise. Although interventions are planned and implemented to other monuments on the site, plans and provisions for visitors or the future maintenance of the monument do not appear anywhere. Furthermore, a management plan should be based on establishing the significance and the values of the monument and the site and, as shown above, only references to values have been made, without further analysis or exploration of them.

The organisation of the work-site is exceptional and is presented analytically within the anastylosis study (see Zervoudaki 2002, 6; Pikoula 2002c, 183-187). Its aim is to cause minimum disturbance to the visitor flow within the site, without machinery protruding and imposing itself upon the monuments. The work-site that is located within the Acropolis is visible, as expected, but it does not interrupt the circulation of visitors nor does it impose on our view of the monument. Planning the anastylosis in six stages is also designated as a provision to cause minimum interruption to the site.
Such provisions are also encountered in the Acropolis of Athens, providing an excellent example in the diversity of aspects that site management should deal with.

Some problems worth referring to are the lack of funding and appropriate personnel (see Eleftheriou 2002i, 47). These delayed the anastylosis for about 10 years, even though the monument was in immediate danger and further destruction could have possibly had happened. Hence, it is important to devise ways in which our archaeological heritage will not be in danger and care for it will be available when necessary. Realistically, this is difficult to happen, as not much funding is generally available for cultural programs. This is also why many countries depend on tourism to provide the money for preserving their heritage, which, in turn, may lead to imposing presentations and full reconstructions in order to appeal to tourists. Thus, a circle is created which could influence professional approaches.

The restorers also inform us that two anastylosis initially drafted were considered inadequate (see Zervoudaki 2002, 5; Eleftheriou 2002i, 46-48), so a third one was planned after consideration of the aims of the intervention. Structural or morphological problems had to be solved while the educational and historical values of the monument played a significant role too.

Regarding the educational values of the Stoa, the committee admits that the form of the monument responds to the demands of modern society for educational benefits (see Eleftheriou 2002d, 109). Generally, education is prioritised in interventions and stirs debates as to what extent it should enforce monument restoration. Here, educational values appear to remarkably influence the conduct of anastylosis and its extent. Only a simple reference, rather than further exploration of the matter is made.

Related to the educational values is the issue of improving the legibility of the monument and the ways in which this affects its authenticity. Improvement of legibility elevates the monument and its scenic layout in accordance to the concepts of the Hellenistic architecture. Similar was the objective of the Italian restoration. Yet, the monument is presented in a fragmentary way, which is neither authentic nor does it recreate the building. It rather provides an idea of how the monument may have looked. No matter how faithful the anastylosis is, the monument will never be
the original, despite the restorers emphasising authenticity issues (see Eleftheriou 2002d, 107-110; Pikoula and Papadimitriou 2002a, 171).

An issue strongly linked with the above is aesthetics. The current restorers judge the Italian interventions as aesthetically successful (see Eleftheriou 2002i, 44), despite the emerging technical problems and the noted inaccuracies. The monument appeared harmonious to the non-specialist public and was represented in accordance with the scenic display of Hellenistic architecture. The current anastylosis of the Stoa is not completed yet; but so far the result could still be aesthetically successful as the monument is presented without strong differences in colours of new and original material because its anastylosis deals with the emerging technical problems and does not change the form of the building. However, a closer look at the restored parts shows many morphological discrepancies between distorted original members and integrated new ones. Still, aesthetics is an issue exposed to subjective judgements, while in cases such as the Stoa, where the intervention is oriented towards correction of past mistakes, the meaning and fulfilment of aesthetics becomes an even more problematic matter.

Another important issue arises from a comment made by Eleftheriou (2002i, 45) who states that the Italian anastylosis was addressed to a dead monument, because in Italy, interventions to a dead monument had a specific theoretical framework characterised by minimum intervention and conservation actions. As it has been commented upon before, the notion has been abandoned in architectural conservation and restoration. Yet, a certain truth in the initial concept should be acknowledged. Despite monuments being constant reminders of our past and form our heritage, which is still valued and preserved for the future – hence, they are in a way living monuments – there are still distinguished into monuments that belong to a past and distant culture and those that still form symbolic representations of cultures and religions, therefore, their preservation is essential for achieving these symbolisms. For instance, the Stoa belongs to the classical/Hellenistic civilisation and nowadays is not used in its previous function (a public space used for the gathering of people). It forms part of an archaeological site. It does not need to survive in an absolutely perfect form to represent its initial function; that is indicated by its anastylosis. On the other hand, temples in eastern countries, such as Japan, China and so on, are still part of the
religion that is currently dominant among people. Therefore, they should be in perfect state for fulfilling the reason of their existence; so, full interventions are needed. It is in this sense that the concept becomes useful for restorers and guides them in deciding the extent and manner of intervention. But this should be acknowledged of being achieved in a single level only, the primary decision on intervention. Given the latest theories of heritage management and conservation, decision-making is not as straightforward.

What should be further discussed is that the aim of the Italian restoration focused on preserving the Stoa as archaeological heritage to legitimise the Italian conquest of the island. Only what it represented and how that could be interpreted and presented in order to facilitate political motives were crucial. Hence, political legitimisation was directed towards appropriating the past of the island and supporting ‘national pride’ (see Papadimitriou 1988, 170), by promoting the Greek-Roman idea and establishing the conquerors in the area. This explanation provides an insight into the political motives of restoration and anastylosis. Since these restorations belong to the past and have become history, it is easier to exercise criticism and be direct in our judgements. Politics is a sensitive issue and current politics are even more sensitive. Hence, it becomes impossible to exercise criticism or extract some truth on their impact on certain actions, in particular, interventions in heritage and the reasoning behind it. The current intervention on the Stoa does not have any direct political motive. Greece is an independent country that does not need to legitimise its heritage. Still, a certain preference is directed towards classical heritage, indicated by the amount of effort and money placed upon its preservation (the five committees working so far in anastylosis projects in Greece are dealing with classical monuments only). This tendency could only be explained by the gravity placed in preserving classical heritage as the most significant in the history of the Greek nation, in a time when the cultural diversity of each country is highly valued.

An issue that should be highlighted regards the involvement of foreign expeditions in countries that cannot provide for their archaeological heritage. Such expeditions may prioritise different values and aspects in their undertakings, and that was quite frequent in the past. For instance, the Danish expedition appears to have had archaeological research as their priority and only proceeded in small repairs while
the Italian one had a political agenda that dictated the interventions. Yet, people interested in heritage are never informed, let alone consulted of the projects.

On the other hand, public involvement and information does not necessarily occur in contemporary times either. In the planned interventions in the Lindos monuments, the public and the local people are mentioned nowhere and there seem to be no plans for informing or involving them. The information addressed to them is minimal – only a sign and a notice board are found in front of the monument, and some more detailed information in the vaults (figs. 144, 146). There are no indications of improved interpretation. Major objective is the care of the monuments in question, rather than the way they are perceived and valued by the public. This is apparent in all case studies examined so far. In an era where values and public involvement in conservation and management decision-making and when education and improvement of legibility address the public, it is at least worrying that no efforts are put towards the visitors and locals, their perceptions, and their understanding and appreciation of heritage.

The advantages and disadvantages of the intervention are found in exactly the aims it seeks to achieve – halt of deterioration, restoration of static sufficiency, and improvement of morphological restitution. The overall result so far is not much different compared to the image of the monument before the recent anastylosis. However, the intervention required a great amount of new material while some original material was removed from the monument. This has resulted in the Stoa looking more like a reconstructed monument rather than re-assembled from its original members, despite the admirable technical and scientific actions. Education and improvement of legibility of the structure rely only on its restored form. This results in anastylosis becoming an intervention too ambitious with regard to its educational result, with the subsequent result of extending the degree of intervention to achieve this.
CHAPTER 5: CASE STUDIES FROM TURKEY

Examination of the case studies from Turkey (fig. 148) includes a brief description of each monument and its state of preservation, as well as a detailed presentation of the anastylosis programme. Discussion of the objectives of the restorers and the theoretical framework of the anastylosis follows, together with observations about issues arising from the undertaken works.

Further information and an extensive presentation of the history and the anastylosis of the monuments in question, including full bibliographical references, can be found in Appendix E. A glossary of architectural and archaeological terms is found in Appendix F. Photographs of the monuments and the anastylosis works are presented in Appendix A.

5.1 The Library of Celsus at Ephesus

5.1.1 The Library of Celsus

Ephesus (figs. 149-151), in the Aegean coast of Turkey, has a long history from classical to Christian times. The Library of Celsus (113-116/117 AD) is a Roman building. It had an aediculated façade, with niches embellished with statues (fig. 152). Inside, galleries in three storeys surrounded a hall. In the 4th century the façade was transformed to the back wall of a nymphaeum, which was destroyed by an earthquake in the Middle Ages.

The Library was uncovered in 1903-1906 by the Austrian Archaeological Institute (figs. 153, 154). By 1970, the ground plan was relatively well preserved. The 17m walls were preserved to a height of 7 metres. The inside wall did not survive and the façade had fallen forward. Missing elements, identified in locations in Ephesus and Izmir, were collected. Anastylosis was implemented during 1970-1978 (fig. 155).
5.1.1.1 The anastylosis programme

The intention was to restore only the marble façade (figs. 156, 157), leaving the interior walls, of stone masonry, and space in a ruinous state (figs. 159, 160). Between 75% and 90% of original material was recovered from excavation and museums. Methods were developed using modern devices (fig. 161). Detailed documentation, including photography and drawing, was undertaken. Whenever problems were presented, the plan was altered accordingly (Baker 1994, 24; Demas 1997a, 140; Hueber and Strocka 1975, 11-14; Scherrer 2000, 39; Schmidt 1993, 165-167; Wiplinger and Wlach 1996, 124).

The blocks of the façade were re-erected in their original positions (figs. 155, 162, 163), if they could be determined. Some missing members, specifically column shafts and capitals, were replaced by copies, which had a colour suitable to the marble (fig. 166). Ornamentation was copied only so far as the continuity of form and the original light-shade effect required (figs. 164, 168). Decoration on pilaster shafts was followed in a form similar to the original (fig. 165a). Wall surfaces imitated ashlar masonry. Defects, such as the age of the building, earlier repairs, and tracks of its collapse, remained untouched (fig. 166). Smaller defects were filled in with white cement mortar. Edges and structural lines were carefully restored. Plaster casts of the statues were placed in the four aedicule of the lower storey (fig. 165b). The ancient building was fitted into a reinforced concrete skeleton to secure it against earthquakes. Columns and entablature were re-erected to give the effect of the original building structure and components not able to carry a load were replaced by new elements. Epoxy resin connected structural members and lead plates were put among joined members (Demas 1997a, 146-147; Hueber 1997, 79; Hueber and Strocka 1975, 14; Scherrer 2000, 130; Schmidt 1993, 165-168 and 252-253; Wiplinger and Wlach 1996, 124).

In the first three years, preparatory work included: documentation of material, arrangement of architectural fragments; doweling of broken pieces; preparation of the space in front of the library for the crane; photogrammetrical record of the building; completion of control excavations; geological studies to identify new quarries; mineralogical analysis of marble; dismantling of the remains of the façade; and estimation of the load-carrying capacity of the foundations. From 1973 onwards,
the wall of the lower storey was restored up to the architrave; the columns of the front and upper storeys were set in place; the lower storey was erected; the coffered ceilings were placed in position; the back wall of the next storey was rebuilt; and the façade was restored (Hueber and Strocka 1975, 11-12; Schmidt 1993, 166-167; Vetters 1971, 37; 1972, 43; 1974, 31-36; 1976, 40; 1977, 39; 1978, 20; Wiplinger and Wlach 1996, 124).

5.1.1.2 Observations and discussion

5.1.1.2.1 Analysis of objectives, and whether or not they were met

Architectural members were exposed to tourism and nature. Anastylosis would protect the structure and fabric of the monument, as fragments would be set against decomposition, human action, and fires, rather than lying on the ground (Hueber 1997, 78; Hueber and Strocka 1975, 10). This aim acknowledges the negative impact of uncontrolled tourism on a site (fig. 172). If monuments in an archaeological site are not restored, then wear from visitors, who in the best case scenario simply walk around ruins and dispersed members, becomes destructive. Consequently, re-integration of architectural and structural members in the building contributes to their safeguarding and protection against human wear, decomposition, and natural forces. It should be admitted that re-assembly of members in the Library has protected them more efficiently and they have survived in a better state since the 1970s.

The comment that anastylosis can ‘...make historical building processes comprehensible’ (Wiplinger and Wlach 1996, vii) is in accordance with what one of the restorers recently emphasised. Hueber (2002) sustains that anastylosis is a method of looking at and understanding building practices. Anastylosis was further rationalised on the basis of its research value for scholars (Demas 1997a, 140). Indeed, during the works, practitioners had the ability to study in detail the architecture, decoration, and construction of the monument. Additionally, anastylosis contributed in the sense that further research was undertaken on the monument. For instance, Baker (1994) studied the monument as one of the Roman Imperial Architecture examples.
Another objective was that re-assembly of dispersed members would make them better understood by both laymen and experts. Visitors would gain a real insight into ancient architecture, as they want to experience the original figure, function, and importance of a monument (Hueber and Strocka 1975, 10; Schmidt 1999, 64). This has been achieved. The monument rises within the site in a way that its figure and form are easily distinguished and understood. Its architecture becomes clearer. Its legibility is improved. The façade welcomes visitors who walk down the Processional Way (fig. 171) and gives them an idea of how the monument must have originally looked. Still, in order to comprehend and experience it, other ways of interpretation and presentation need to be employed, as it is quite hard to fully understand the function of the building as a library.

In total, I would be inclined to acknowledge that the objectives of the restorers were met. Anastylosis has improved not only the state of preservation of the monument but also its understanding and has enhanced its architectural and research values.

5.1.1.2.2 Theoretical framework of the anastylosis works

The restorers used the Venice Charter as their philosophical guide (Demas 1997a, 140; Schmidt 1993, 165). The charter guided the works just six years after its introduction in the international architectural conservation field. Careful examination of the undertaken works reinforces the above statement, although there is no further analysis on how it was followed and which articles were of particular importance to the restorers. This indicates that the need for anastylosis principles is great and restorers, when provided with a relevant guide, follow them and treat monuments with the utmost respect. The Venice Charter establishes general restoration principles, as they have emerged from years of restoring monuments and debating theoretical principles. Since a great amount of monuments in the Mediterranean are subjected to anastylosis, specific guidelines could facilitate decisions and processes.

Some principles of the charter, followed in every anastylosis examined so far, will not be extensively discussed here. For instance, enhancement of the values of the monument (Articles 3 and 5) is reflected on the Library being restored as a surviving example of the Roman Imperial architecture. Its architectural, historical and artistic-aesthetic values are annotated with the anastylosis. Obviously, more values can be
addressed to this monument, such as its social and cultural ones (see Article 5). They are also enhanced, without this being the primary objective of anastylosis, rather its result. For instance, the monument is used for social gatherings and cultural events (see Demas 1997a, 130).

Another principle refers to the harmonious but distinguishable integration of new parts (Article 12). The employed methods, including suitable colour, original light-shade, preservation of the patina of age, and limitations in the copying of the ornamentation (figs. 167, 169), indicate consideration of the aesthetic result. Some adopted techniques are not encountered in our later examples (the effect of light), whilst others (the patina of age) form a matter of constant speculation among professionals.

The principles of minimum use of new material for additions (Articles 13 and 15) are followed here too. A close look at the monument (figs. 164-169) reveals that most original material was integrated back to the structure, while the newly introduced one is not extensive. This is also confirmed by the restorers who state that the surviving material amounted to 75-90%.

Resource to all sciences and techniques (Article 2) and use of modern ones, if traditional ones prove inadequate (Article 10) are principles strictly followed in this anastylosis. Not much discussion refers to the use of traditional methods and techniques, possibly due to the fact that some years after the Venice Charter, it was still challenging to employ new devices and methods for intervention. Nowadays, the challenge is found in the use of traditional techniques, as emphasis is placed on the authenticity of craftsmanship and design. Yet, modern technology is not refuted, if, by adopting it, decisions are facilitated and mistakes are eliminated.

A primary issue to be considered is the collaboration of the disciplines of archaeology and architecture in this anastylosis, in contrast to the multidisciplinary approaches discussed in the recent case studies. The duties of archaeologists and architects were clearly defined and attention was paid to their co-operation (see Hueber and Strocka 1975, 14). However, in this case too, more disciplines contributed to planning and implementing anastylosis. Among them were:
photogrammetry, for recording structural and architectural members before and after anastylosis; and geology and mineralogy, for identification of quarries and production of stones. Collaboration of multiple disciplines in anastylosis had just initiated.

In addition, care for the monuments surroundings as advocated in the *Venice Charter* (Article 6) is reflected in the anastylosis of the South Gate of the Tetragonos Agora and the Gate of Mazaeus and Mithridates (figs. 158), while many more monuments have been restored (fig. 173-176). The need for preservation and elevation of the surroundings of the Library are reasons for their restoration. My personal evaluation of the impact of the restored Library on the nearby monuments is positive. As most of them have been restored too, they create a homogeneous ensemble, in which the Library perfectly adjusts, because it is not raised around ruined buildings. Surrounding monuments are lower than the Library, but this was the intention of the creators of the buildings of Ephesus. The Library restorers acknowledge that they paid attention to the harmonious impression of the scenery (see Hueber and Strocka 1975, 10) and this is obvious (fig. 150). Criticism over the prominence of the Library (see Demas 1997a, 140; Schmidt 1993, 55 and 168) could be dismissed in the sense that further monuments and ordinary buildings are currently restored and that the restoration process at Ephesus did not pause after the anastylosis of the Library.

Respect for the valid contributions of all periods, as endorsed in Article 11 of the *Venice Charter*, becomes slightly tricky in this anastylosis. It is known that the library was altered in plan and function during its history, changing from a heroon-library to a nymphaeum. Anastylosis focused on the initial phase of the monument and its façade (see Hueber and Strocka 1975, 11-14). That was justified by the amount of original material deriving from that part of the monument and the specific historical phase. Additional justifications included the exceptional ornamentation of the façade, which reflects historical, artistic, and architectural values. Consequently, anastylosis was justified on the basis of the surviving material and the values of the monument, despite limitations in their assessment.

Finally, the requirement of the charter for detailed documentation and distribution of published material (Article 16) is certainly fulfilled in this case. The anastylosis of
the Library and the research undertaken in Ephesus have been published and circulated around the international scientific community (see Scherrer 2000, 5). That should be praised, as it shows the commitment of the responsible authorities to ensure dissemination of information. As sustained by the representatives of the Austrian Archaeological Institute (see Koester 1995, xvii), limitations are found on the fact that information is mainly in German. Hence, in the most recent publication a revised edition in English has been included. This highlights the problem of the accessibility of information, because not every researcher or interested person will be able to read all possible languages. It was a main impediment during my research, because the majority of publications on the Library are in German. I had to heavily rely on some published material in English that was not as exhaustive or detailed. In this regard, translated publications would provide the desired amount of information to everybody.

5.1.1.2.3 Issues arising from the project

Tourism seems to have been a driving force for this anastylosis, as well as for extending restoration works to other monuments of the site (see Demas 1997a, 142; Hueber 1997, 21; Hueber and Strocka 1975, 10-11; Schmidt 1993, 168; 1999, 64; Wiplinger and Wlach 1996, vii). As seen above, improvement of the legibility and preservation of the monument were the major objectives of the restorers. Both these aims are addressed to visitors, yet, tourism did not dictate the extent and amount of restoration. Anastylosis of the Library was planned and implemented by its restorers with the aims of protecting the monument itself and enhancing its research values. It became the most famous of all undertaken restoration activities in the site and it certainly attracts increasing numbers of visitors every year. Professionals have become gradually concerned about the future of Ephesus, because problems are caused due to the inability or lack of consideration of exercising some control over tourism. With restoration and anastylosis taking place without real planning and management consideration, uncontrolled tourism (figs. 171, 172) became the major destructive force of the site, depriving it of its sustainability. The importance of planned management, according to the needs of the individual monuments and the site in which it is found, becomes clearer with time. It is also never too late to consider a management plan, in view of the further destruction that may be caused to the site and the monuments by its absence.
This is one of the few monuments examined so far, where notice boards with information about its history, archaeology and the anastylosis can be found in its interior space (fig. 170). Those interested to learn about the monument and its modern history are provided with some information, which is still minimal and does not cover demands for interpretation for the public. Further means could have been employed, such as more diagrams, photographs, and so on. In another note, the notice boards are found in the interior of the monument, so they do not detract from the restored façade.

The impact of this anastylosis to national identity should also be examined. Anastylosis of the Library was not designed with that in mind, but the final result is certainly ‘exploited’ in this regard. The use of the Library as a symbolic link between Europe and Turkey, mainly through tourist campaigns (see Demas 1997a, 131), confirms the function of monuments as national symbols in order to reinforce the identity of people or advance political goals. On the other hand, anastylosis has given possibilities for the country to perform social gatherings and cultural events in the monument (see Demas 1997a, 130). As such, the local and national population is given the opportunity to enhance its cultural identity and appreciate the monument.

Further to that, the monument was excavated and researched in the beginning of the 20th century, but the decision for anastylosis was not taken until the 1970's. It is not known why this happened. Monuments should be preserved after excavation, otherwise they are subjected to great deterioration. Various factors may delay the implementation of anastylosis, such as lack of resources in terms of infrastructure, finance, and personnel, together with bureaucratic matters. Consequently, the importance of an organised plan for the site that includes excavation and research and provides for conservation and anastylosis for its monuments is highlighted.

Extensive archaeological and architectural study of the monument preceded anastylosis, just as the Venice Charter requires. The study was changed when problems were raised in the course of works (see Hueber and Strocka 1975, 14). This approach has also been noted in the Greek case studies. It indicates that even a well-prepared plan may need to be subjected to changes and alterations to accommodate
the needs of individual monuments and the problems and ambiguities that may emerge.

The anastylosis resulted from the involvement of the Austrian Archaeological Institute in Turkey. This matter has been discussed in relation to the Hellenistic Stoa in Lindos, in Greece. In this case, the foreign school achieved an excellent collaboration with the Turkish authorities, which improves as the years go by (see Scherrer 2000, 5). Involvement of foreign schools in the past was unsuccessful, because the authorities of the host countries were either non-existent or lacking the structure for control and collaboration. Soon these countries established archaeological organisations that controlled the role of these institutions. With time, co-operation of foreign schools with the local authorities produced better results in terms of research and heritage preservation. This is why the Library anastylosis is considered a model for future collaborative undertakings (see Scherrer 2000, 5; Schmidt 1999, 64).

Anastylosis was chosen because of the amount of surviving material from the façade and the completeness of the remains (figs. 156, 157) together with the attempt to indicate the form of the monument and the connection of its members (see Hueber and Strocka 1975, 10-11). The latter forms the argument against the suggestion of simply storing dispersed surviving members in a protected location to avoid their further damage from human and natural forces. Once more, the amount of original material and the willingness to improve the legibility of a monument become the primary reasons for choosing and implementing anastylosis. This is exactly where the advantages of the undertaken intervention are found.

The restorers have also discussed the standards of anastylosis and reconstruction (see Hueber and Strocka 1975, 11), identifying their work as anastylosis. According to them, a partial restoration with original material is an anastylosis, while reconstruction accounts for the 1:1 rebuilding of a monument. In addition, it is explained that the visual difference between the two is the introduction of new materials, that is extensive mainly in reconstruction (see Demas 1997a, 146-147). These ideas are not analytically discussed, but provide an insight in what is considered permissible in these two kinds of intervention and what differentiates
them. Hence, restoration of the façade, where most original material existed, is definitely an anastylosis. Reluctance towards reconstruction is identified, as reconstruction is regarded an intervention with excessive use of modern material. A preference towards less interventive approaches is also obvious.

As far as the accuracy of the published data is concerned, it is once again difficult to precisely establish the proposed work that was actually undertaken. In general, there seems not to be any discrepancies. The façade has been restored while the interior has been left almost as found, since not much material survived. Nonetheless, not much information is found regarding the state of preservation of the original material, the completions with new material, and the parts in which completions were integrated.

A significant matter that should be discussed regards the statements about the amount of original material recovered from site excavations and from architectural members transferred to museums. Published information varies, so it is not lucid how much material was preserved. The architect in charge mentions that 75% of members survived (see Hueber and Strocka 1975), and possibly this is the correct amount. Others (see Baker 1994, 24; Schmidt 1993, 165) refer to a 90% of original material. These references to the amount of original fabric do not specify whether this amount derives from the façade only, or from both the façade and the walls. Since anastylosis was limited to the façade, then probably the material derived from that. Yet, consistency is important when implementing anastylosis and assessing its results. This observation is in agreement with anastylosis professionals stressing in the survey (Chapter 6) that percentages of surviving material should refer to volume, mass, surface, and entirety of members. This, again, raises the previously discussed matter of the establishment of a specific percentage of surviving material that would justify anastylosis.

Another issue relates to the re-integration of surviving members in their original or matching locations. It is stated that architectural members were re-assembled only when their original positions could be determined. Thus, there is no compromise regarding their assembly in non-original locations, in contrast to the other examples.
A noteworthy technical matter regards the use of an earthquake-proof reinforced concrete skeleton into which the ancient structure was fitted. Early in the history of anastylosis practices, professionals used this system to guard against damage caused by earthquakes. With the passage of time, it was proved that this system, apart from being exceedingly interventive, it was damaging too. However, technology was not exceptionally advanced to test the possible results of the use of certain materials at that time. However, so far, no structural problems are known to have been presented.

The results of anastylosis of the Library should be further discussed. The monument is judged an 'artificial ruin' (see Demas 1997a, 146-147; Schmidt 1993, 68). That is obviously correct, because the ancient building is not recovered. Original material is missing and the original function cannot be restored. The monument has been restored in a state that has not survived through time. The result is certainly not authentic, as expected, since the form, image, and function of the Library are not restored. Nonetheless, form and image are rather indicated and, in this regard, the anastylosis could be judged as successful.

The comment by Scherrer (2000, 134) about the whole ensemble presented in a form that never existed in antiquity, after excavation and restoration works undertaken in the Library Square, is noteworthy. It forms the inherent question in excavation, restoration and anastylosis works undertaken in archaeological sites. Excavation reveals monuments in a ruined state, but rarely in their original form. Although debates question whether it consists destruction or not, the result of excavation is to reveal these monuments, which otherwise would not have been known. The state of excavated monuments is the state of their preservation or destruction through time. On the other hand, restoration and anastylosis, which mainly aim at pausing deterioration, preserve the monument for the future and present it in a legible state to the public. They seem to be more interventive and achieve a form that never existed in the past. However, we should accept that there is no proper method of presenting a monument in its original form, apart from using modern technology, such as multimedia presentations. Every method of preserving and presenting a monument has an interventive nature. If reconstruction is chosen, then the result is a modern creation. Hence, the only non-interventive action would be to take no action at all,
leaving the monument to deteriorate further. Thus, the only choice for preservation and presentation of monuments becomes the modest extent of intervention.

5.2 The Temple of Trajan (Trajaneum) at Pergamon

5.2.1 The Temple of Trajan (Trajaneum)
The temple (2nd century AD) is situated on the upper acropolis (fig. 179) of Pergamon (figs. 177, 178). It stood on a platform, which was artificially created with vaults and retaining walls (fig. 180a). It was peripteral, of the Corinthian order, built with white marble, and surrounded by stoas on its three sides (fig. 180b).

Excavations were carried out in the 20th century on behalf of the Berlin Museum and many sculptural elements were transferred to Berlin. Between the 1960's and the late 1980's, the German Archaeological Institute undertook anastylosis of the Trajaneum, and development of the site presentation with the co-operation of the Turkish authorities. The substructure was preserved fairly well but, after the front sections of the vaults collapsed, it was filled with debris and building stones. On the hillside, marble blocks were protected by earth accumulations. On the west, the terrace vaultings and the building had collapsed. On the east, the platform was preserved to a greater extent. The north wall did not survive in full height and the ashlar of the northern stoa had been destroyed. The wall of the valley-side was found in good state. In total, a great number of elements survived.

5.2.1.1 The anastylosis programme
The temple was theoretically reconstituted with archaeological and architectural investigations and meticulous documentation, including photogrammetry, and from fitting together broken parts and checking their sequence (Nohlen 1985, 149-150; 1997, 188-191; 1999, 94).

In the substructure, the ancient building style was followed. Broken vaults were consolidated up to the ancient construction joint over the passageway (fig. 181a). Missing parts of the vaults were set using rubble stones and mortar fill, similarly to

Stone members from the upper structure were cleaned form dirty crusts and lichens. If they yielded sufficient information, they were joined together and restored to their original position, provided they could give precise indications regarding the structure. Epoxy resin was used as glue. Rods of titanium-stabilised stainless steel were drilled in (fig. 182a); the drill holes differed in depth, so as not to strain the marble. In higher elements, which are not subjected to tension, fibreglass was employed to minimise the risk of lighting. Missing parts were completed, only where necessary, by artificial stone of crushed marble and white cement. Breaks and small defects were left visible (fig. 183a, b), in order to retain the signs of age. Only profiles and major features were indicated (fig. 183c), completing basic lines but not competing with the ancient ornamentation. Experimentation proved that it was important to reconstruct entire forms. Casts were used in a few cases for structural elements of identical form. Flutes were added to new column drums; they were worked on after the assembly of drums (fig. 182b). The material was skilfully worked to yield a lively surface. Advanced technology facilitated shifting and reassembling members without damaging them and their ornamentation (fig. 185) (Nohlen 1985, 147-158; 1997, 191-194; 1999, 91-98; Schmidt 1993, 174-179).

Structural parts work as independent blocks. However, missing connections to rigid elements necessitated strengthening of certain links, with newly inserted connection dowels. The re-erected columns are not connected with internal constructions, as in antiquity. Since the columns are incomplete, the building cannot rely on the original system but has to be stable. Safety measures against potential earthquakes were taken with the view that, in such a case, the steel would reach breaking point before the elements collapse, but will not be shattered (Nohlen 1985, 159; 1997, 194; 1999, 99; Schmidt 1993, 175-179; Starosta 1999, 89).

Stairs and paths lead through the site. Information is available to visitors (fig. 186). Members not reassembled are arranged as an on-site exhibition (figs. 187, 188). The work-site was arranged east of the temple and included workrooms for draftsmen and stoncutters, together with depots for ceramics and stones. Scaffoldings, trucks,
cranes and smaller devices formed a sophisticated technology, which was obstructive but carefully operated (Nohlen 1985, 146-159; 1997, 194-195; 1999, 99-101).

The silhouette of the re-erected sections follows the slope of the hill. The temple was divided into two sections (figs. 181b, 184, 189, 195, 196), leaving the western part almost un-restored (figs. 190, 191). An exception was made for three columns of the western stoa, so as to indicate the width of the terrace. Restoration concentrated on the eastern section (fig. 192). The wall of the hall was rebuilt with artificial ashlers. A row of columns was placed above the eastern temple court and opposite the temple pediment. The north and east stoas and the north-east corner were restored to full height (Nohlen 1985, 159; 1997, 191; 1999, 97; Schmidt 1993, 174-176).

### 5.2.1.2 Observations and discussion

#### 5.2.1.2.1 Analysis of objectives, and whether or not they were met

The main aim was identical to the international meaning of anastylosis, the re-assembly of existing by dismembered parts of the monument (Nohlen 1999, 101). Interestingly, this is the first case examined so far that this objective is encountered. The deriving conclusion is the confirmation of the meaning of anastylosis as a specific type of intervention to monuments. Obviously, re-assembly is not a sheer aim, as it entails diverse gains, such as protection and presentation.

According to the restorer, anastylosis served various research aspects, with regard to archaeological and conservation investigations, systematic documentation, and understanding of the construction process (see Nohlen 1985, 145; 1997, 189; 1999, 101). The result was a large quantity of information regarding the monument, such as its architecture and construction and its later use and destruction. Anastylosis is, thus, closely connected to archaeology, architecture, structural engineering, and conservation, depending on the problems presented by individual monuments. Consequently, in order to apply this intervention, diverse investigations were meticulously undertaken and relevant research was enriched. These aspects of anastylosis should never be ignored in its implementation. It is not surprising then that the restorer describes anastylosis as ‘a window in the history of monuments’ (Nohlen 1997, 190).
Additionally, by restoring architectural elements to their original places they would be protected against deterioration, decomposition, wind, rain, humidity, root spraying and vandalism (Nohlen 1985, 145; 1997, 188-196; 1999, 101). As noted in other examined cases too, a major argument for anastylosis is the protection of architecture, since surviving elements would not lie dispersed around the ruined monument and its surroundings. Apparently, the re-assembled members have since been better protected. Many members not assembled on the monument are organised as an on site exhibition, though this has proved a major impediment to their protection, as noted by Hoepfner (in CCAM 1995, 207). In the Trajaneum, protection of the ruin partly argued the anastylosis and contributed to the greater discussion over the aims of anastylosis in relation to preservation. In addition, restoration of the substructure aimed, not at completeness, but at ensuring lasting preservation and safety of workers and visitors in the area (see Nohlen 1985, 155). Accessibility for the personnel in order to work on the anastylosis of the temple and of the visitors in order to safely wander around the monument was a significant consideration.

The anastylosis was also related to the presentation of the temple and the conducted research. As Nohlen (1985, 145-168; 1997, 188-196; 1999, 99-101) confirms, visual guidelines for visitors would be provided, so that they would understand the proportions, dimensions, construction and decoration of the monument, as well as its location in the site. Indeed, the connection of architectural members has become clearer and recovery of the third dimension has been achieved, while the archaeology of the monument is effectively presented. This forms a significant issue raised in monument conservation, as presentation is a major objective of restoration. Besides, research becomes of equal importance with preservation and indicates the orientation of current approaches, which are focused on enhancement of presentation for scholarly reasons and for the visitors’ apprehension of archaeological heritage.

Interestingly, the improvement of the legibility of the monument has been openly discussed by the restorer and site manager (see Nohlen 1985, 144 and 168; 1997, 186 and 191; 1999, 91 and 101). Visitors are not expected to understand and appreciate a ruined monument. They are not confronted by a fully restored monument either. There was no need to provide them with a set idea of the original form of the
Trajaneum. What was sought was motivation of their imagination to compose the monument within the site, as well as guidance in the field of Hellenistic and Roman architecture. No arguments for educating the public through anastylosis were advocated. The public was not underestimated because of their lack of architectural knowledge. The aim was, and it has been achieved, to give indications, acknowledging that scholarship does not have all answers, but can assist in answering most questions and encourage further involvement in acquiring knowledge and understanding of monuments.

Turkey, and many other Mediterranean countries, relies on tourism for increasing the income of the country. It is not surprising that monument preservation also aims at promoting tourism. According to the restorer, anastylosis was a gesture of gratitude and economic help from the German Institute towards the country for the provided research opportunities. Additionally, the Turkish government probably requested restoration for the better presentation of the monument, so as to create a reason to visit the site, and, consequently, increase tourism (Nohlen 1985, 144-145; 1997, 185-186; 1999, 92). Thus, tourism and financial reasons played an important role and can be identified as major driving forces for this anastylosis. Yet, they did not directly influence the restorers nor did they deduct from a professional approach to anastylosis. While financial reasons influenced decisions, their impact on anastylosis decisions was minimal, apart from certain aspects, such as the choice of stone, which took into account less expensive solutions (see Schmidt 1993, 179).

In general, the aims and objectives of the restorers were met. Members were re-assembled in the original location on the monument, archaeological and architectural research was evidently enriched, the previously dispersed members have since been better protected against human and natural forces, the Trajaneum has certainly become more legible, whilst visitation to the monument is quite high.

**5.2.1.2.2 Theoretical framework of the anastylosis works**

The Trajaneum restorer states that the 20th century restoration principles were followed (see Nohlen 1997, 185). However, the *Venice Charter*, though a valid conservation document, is not mentioned anywhere. That is striking since all principles guiding the works can be identified with the principles of the charter. In

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direct observation of its principles reflects their validity and their representation of the current restoration philosophies.

Among them is the collaboration of a wide range of disciplines, as Article 2 of the charter is interpreted recently. Such disciplines were archaeology, architecture, ancient history, conservation, civil engineering, photography and illustration, while skilled stonemasons from Germany assisted in training the local workers (see Schmidt 1993, 174). Nowadays, discipline collaboration has progressed, compared to past projects, while the disciplines themselves advance as time goes by. Their methods and technologies develop, providing better results. This is encouraging for achieving successful results in technical matters at least. Another point to be made regards the employment of marble workers and the importance of their training, an approach similar to the one noted in the anastylosis of the Parthenon and the Erechtheion.

Related to the above is Article 10 of the charter about the use of new and traditional methods and technologies. The statement that availability of modern technologies was a great incentive for undertaking anastylosis (see Nohlen 1997, 185; Tuna 2001, 10) could be interpreted in the sense of facilitating the planning and undertaking of the works. For instance, the use of photogrammetry assisted in accurately measuring and documenting surviving members and supplemented the documentation. It tackled problems deriving from the unavailability of information, which was due to the incomplete records of the past interventions. Modern technology made further possibilities available, such as the production of artificial stone for completions as a compatible material.

On the other hand, attachment to ancient working methods and techniques should be highlighted, especially in working on the columns (fig. 182b). This can probably be attributed to the recent tendency for respect for the authenticity of workmanship. Modern technologies were mainly employed for works that had to be executed carefully, such as the shifting and re-assembly of members (fig. 185). Thus, it would be safe to assume that ancient methods were employed for anastylosis procedures whose final results are obvious and affect the ancient fabric. New technologies were used to facilitate works that would not have an impact on the fabric, but ensured its safe handling.
Another principle of this anastylosis in accordance to Article 9 of the charter is that any conjecture regarding the architecture or structure of the temple was avoided. When sufficient information did not exist, a possible solution was suggested or they built nothing at all (see Nohlen 1999, 95). The above approach should be acclaimed for its respect for the monument itself and its authenticity, which will be discussed in more detail below.

Precise investigation of the building before anastylosis is a prerequisite of Article 9 of the charter. In this regard it was stated that research and anastylosis would not be separated from each other (see Schmidt 1993, 174), indicating that both disciplines are so closely connected and dependent on each other. Their relation is self-evident, as investigation leads to results on which anastylosis is based while anastylosis reveals far more information on the building rather than simple archaeological and architectural research.

Respect for the valid contributions of different times in the history of the temple is in accordance with Article 11. The Trajaneum is a Roman monument that gradually reached a ruinous state and was buried until its excavation in modern times. In the substructure, Byzantine elements were discovered and preserved as an indication of the later history of the temple (see Nohlen 1985, 155; 1999, 93). Since historical elements were found only in the substructure, there were no problems about which elements should be presented in the anastylosis of the upper structure. Difficulties may emerge when the decision should be made regarding the choice of restoring a specific period in the history of the monument.

Differentiation rules also followed the principles of the Venice Charter (Article 12). Yet, there was more concern about differentiation rather than integration. Two different approaches were employed, one for the substructure and another one for the upper structure. Everything was decided after careful consideration of available options and choices were balanced. As a consequence, new materials are easily distinguished from the old but the visual continuity of the structure remains unharmed. Yet, a close look reveals a quite contrasting image between new and
original materials. Although, respect for the ancient ornamentation and the choice of not imitating it is noteworthy, the result is quite striking to the eye of the visitor.

The documentation appears to be of high quality, according to the restorer, who sustains that it includes exact measurements, drawings, photographs, photogrammetrical records (see Nohlen 1985, 145-150; 1997, 188; 1999, 94). The aim was not only to plan the anastylosis but also to illustrate the scientific text and to clearly present the monument. Hence, the requirement of the Article 15 of the charter was fulfilled. Of course, these scientific texts are not easily accessible, they are found in the archives of the German Archaeological Institute. Acquisition of information was achieved due to the amount of published material in established academic journals. However, there is no exhaustive publication of the monument, rather accumulation of assorted articles.

On the other hand, the past documentation attempts were judged inadequate and resulted in restraining the abilities of the recent restorers (see Nohlen 1985, 150; 1997, 188; 1999, 91-94), because they were unaware of the location of not documented structural parts. In the past, documentation techniques were not advanced. Absence or inaccuracy of records has been discussed with regard to the inadequate documentation of the Italian exhibition in the anastylosis of the Lindos Stoa, highlighting the importance of exhaustive records.

5.2.1.2.3 Issues arising from the project
In the 19th and 20th centuries, three excavation expeditions took place without the involvement of the Turkish government. Later, archaeological and restoration works were the outcome of co-operation between the two countries. A German committee controlled and supervised the implementation of anastylosis, bringing advanced technologies and methodologies, as well as the funding to realise the works. The Turkish authorities had the final word and were continuously represented throughout the project. This kind of collaboration is excellent, since the Turkish state might not have been able to preserve the monument. Utmost respect and care were shown in this intervention, reinforcing the idea of a common heritage respected by and cared from everybody, irrespectively of their connection to it.
Chapter 5: Case studies from Turkey

The anastylosis of the Trajaneum is only part of a conservation and management process of the entire site of the Pergamon. However, no information is available. Various publications regarding the archaeological research and occasional restoration interventions on the monuments of the site are rare.

Furthermore, not much care for the surroundings of the Trajaneum, especially the nearby Library and the Sanctuary of Athena, which are preserved in their foundations (see Nohlen 1985, 146), seems to be shown. Yet, the partially re-erected temple integrates better in the site, since most of the monuments in its immediate vicinity are ruined. Only a few monuments survive in a fairly good state. But so far, there is no planned restoration or site presentation. Hence, the contrast created among the partially restored monument and the rest of the site is quite striking. Certainly, more attention should be paid to the presentation of the site and that can be part of a general management plan for the Pergamon. This plan could also assess the values attributed to the monument itself, as well as to the site. In my examination of the anastylosis works at the Trajaneum, no reference to values has been made.

During the course of anastylosis, the work-site was efficiently organised, with provisions for every kind of research that would be undertaken and for the safety of the visitors. This shows consideration for organisation and respect for people involved in the project, and is indicative of the importance of organisational matters.

Within the vicinity of the monument a series of notice boards provide information for the visitors (fig. 186). This information is well-presented with photographs and diagrams, while text is given in three languages (Turkish, German, and English). Despite this being a significant provision for the public, more informative material could be employed in order to achieve thorough presentation and interpretation of the monument. It should also be noted that the decision on anastylosis of the Trajaneum, and even for presentation of the site, was a matter concerning only the German Archaeological Institute and the Turkish authorities. The public, neither the locals nor the visitors, is not mentioned anywhere, even though anastylosis aimed at improving the legibility of the temple.
The amount of surviving material was the factor that determined the kind and extent of the intervention (see Schmidt 1993, 173-174). Since, it did not derive equally from all parts of the monument, anastylosis was implemented only in those parts where the preserved material allowed it (figs. 190-193). This is why the western side of the temple was left un-restored. The solution is similar to the one adopted in the Celsus Library, where only the façade was subjected to anastylosis. The new material to be integrated was decided after consideration of architectural and structural reasons, having minimum intervention as the guiding principle.

Restoration works at the Trajaneum are clearly described as anastylosis (Nohlen 1999, 101). The anastylosis definition is strictly adhered to and followed, as well as the main restoration principles, with special emphasis to the individuality of structural members. Differences between anastylosis and reconstruction are lucidly explained, based on the amount of surviving material and how that determines the intervention, as well as on the extent of the engineering solutions (in anastylosis engineers employed methods for stabilising the structural system rather than altering it). Those differences became easier to understand, after a proposal for a reconstruction was rejected (see Nohlen 1999, 101) and anastylosis was planned. Thus, anastylosis was promoted as a less interventive approach with defined limits and principles, the most important being the re-assembly of surviving architectural and structural members in their original location.

Due to the partial anastylosis, a great amount of structural members not included in the anastylosis, were arranged as an on-site exhibition. For instance, the pediment of the temple was arranged so as to show the connections of the architectural elements (fig. 187). It may be argued that these architectural members suffer from weather conditions. Yet, by being closer to the monument, they are in context and their apprehension by visitors is increased. Their arrangement to show the architectural continuation of co-belonging elements of the same typology provides an insight into ancient architecture.

It should be noted that the data provided on the anastylosis works seems to be accurate. Indeed, the western part is almost un-restored, while anastylosis was mainly implemented on the eastern part. As I have previously stated, it is actually
difficult to double-check and confirm every individual re-assembly of members. Since access to technical reports is not always possible, the technical details may not be available to check. Additionally, this specialised confirmation is difficult to achieve without a relevant architectural background.

A range of technical aspects of this anastylosis are worth mentioning, even though they have been extensively discussed in the case studies examined so far. Initially, before re-assembly, a theoretical reconstitution preceded and was followed by testing how the broken members fitted together and in which locations. This method ensured that when these members would be re-assembled, their location would be the correct one. It warranted that the least possible mistakes would occur. It does not often appear as a process in anastylosis, except in the Nymphaeum at Sagalassos.

Furthermore, anastylosis was planned with a view of a less engineering approach that respected the independence of structural members. The original static system was stabilised, though it was occasionally altered for safety reasons. This principle indicates respect for the monument itself and the authenticity of the structure. However, it has been proven to be the best method for ensuring the safe behaviour of a building in case of mechanical strains, such as earthquakes. That is always taken into consideration, especially since the Mediterranean region is found in an earthquake zone. The choice of material for connecting members had a specific reasoning. The needs of the building were carefully studied and less interventive approaches that would not alter the static balance were sought. The employed solution was respectful of the static system and as less interventive as possible.

Completion of missing parts was done in artificial stone, after examination of the potential of natural and artificial material. The choice is always a crucial issue. Natural stone was judged cheaper and easier to produce. However, the result of the laboratory experiments indicated that artificial stone would be a better and compatible choice (Nohlen 1985, 157-158; 1997, 191; 1999, 97-98; Schmidt 1993, 174-179). Its synthesis is similar to the stone used in the Athenian Acropolis.

Even though there is no detailed information about the amount of original material that survived and was re-assembled on the monument, the restored structure does not
look like extensive new material has been used. A careful examination of the temple (figs. 193, 194), during my visit in 2003, revealed that although the new members are effortlessly distinguished from the original, their amount is not striking or excessive. On the contrary, I would be inclined to say that its integration on the monument is agreeable in the sense that it is apparent how its use facilitated the re-assembly of the well-preserved original material. The choice against full anastylosis also signifies cautiousness and guards against the introduction of too much new material. Thus, it can be safely judged that this anastylosis is indicative of minimum interventions.

The restorer himself confirms that the partial anastylosis depended on the great amount of material that would be needed to re-erect the whole monument. He denotes that anastylosis was planned in a way that would guarantee the understanding that the structure had been re-erected and it would not look as though it was standing there since antiquity (see Nohlen 1985, 146; 1997, 194; 1999, 99-101). Acknowledging that the effect of completeness cannot and should not be objective of anastylosis is better understood in the argument about the aims of anastylosis. Monuments are complete during their life when they functioned in daily lives of people. Anastylosis aims at improved presentation and enhancement of values, rather than recreation of the monuments. This exact idea was promoted through the Trajaneum anastylosis. The form of the monument is indicated, presentation is improved and legibility is facilitated, through intervention. As Nohlen (1997, 195) sustains, ruins should be presented as ruins and not be ‘brought back’.

In turn, this stirs the question on the creation of artificial ruins. The restorer acknowledges that the result of the Trajaneum anastylosis was the creation of a modern ruin with its own architectural and aesthetic qualities (see Nohlen 1985, 146). In my personal opinion, this statement is true. The architectural qualities are not much different than the original ones. By looking at the restored monument, we understand more the architecture of a Roman temple rather than if we were looking at surviving members dispersed on the ground. Aesthetics, however, is an issue more difficult to judge. As it is a quite subjective matter, it is also complex to draw a line between what is aesthetically acceptable or not in an intervention. This is the reason why aesthetics should be meticulously analysed and be subjected to constant criticism and speculation by the professionals themselves, as well as the public.
On the other hand, the anastylosis provided the monument with a form it never had. Obviously, there is nothing more or less that we could expect from this intervention. If we were to provide the entire original form and image of the monument we would have to resort to reconstruction, which would be an extensive intervention. If we wished to completely respect the monument as it has survived through time, the only measures possible would be the conservation of members and their storage, in which they would be easily subjected to study and they could be exhibited as individual findings. However, the aims of anastylosis are also connected to improving the legibility of the architecture and make it understandable to the public. Hence, it should be expected that all judgements on the principles, results, and objectives of anastylosis are relative. To achieve absolute respect of the monument, of its authenticity, integrity, and survival through time, it would mean that the temple should have been left as it survived after excavation. Prioritising any of them at the expense of the other should not be an option. A degree of compromise in our processes and judgements of the final result should be expected. Either way, choices should include modest measures and minimum interventions with careful consideration of the aims sought to be achieved.

5.3 The Hellenistic Nymphaeum at Sagalassos

5.3.1 The Hellenistic Nymphaeum
Sagalassos is located north of Antalya in the Burdur province (fig. 197). The Nymphaeum, dated in the 1st century AD, though four different building phases are distinguished, was built against and partly set into a natural slope in the north-eastern part of the city. It is rectangular, built out of stone (fig. 198). Three Doric porticoes, along the west, north, and east sides, enclosed a courtyard. Parapets and walls formed three water basins. The façade had eight Doric columns. The back walls were constructed of dry masonry. In its building phases, the fountain house became a closed water reservoir and, later, an open-air water basin.

The Nymphaeum was excavated in 1990-1991 (fig. 199a) by specialists from Belgium, the UK, and Turkey. It was relatively well preserved. Most elements were
present around the building and many others were found settled in successive levels (figs. 201-205). Blocks were fragmented in pieces, with cracks and missing pieces. Some stone members from the original structure were missing, e.g. blocks from the south and west wall and steps from the entrance stair. Most of the pavement had disappeared, apart from some slabs found in situ. Parts of the central part of the monument had collapsed. The eastern part of the roof seemed to be in situ, whereas its western half had fallen down. In the east and west wings, the back walls were standing but the porticoes had collapsed and their foundations had slipped. Cornice blocks were missing from the north, east, and west porticoes. The west wall was partially destroyed. Removal of blocks and collapsed parts resulted in clearing the courtyard (fig. 200). Excavations were undertaken around the fountain. By 1997, the Nymphaeum was restored to its original function (fig. 198).

5.3.1.1 The anastylosis programme

Hydrographical, geomorphological, and archaeometric studies, studies of the building stones, and investigations of the structural behaviour and construction methods were undertaken. Further excavations provided information about the building history, and determined the water supply system. 3D multimedia tools are developed for guiding anastylosis efforts and for presenting materials and the site. Minor preparatory work included cleaning of the monument and its surroundings, preparation of working zones, and gathering of information (Bisnir et al. 1993, 85-87; Cosmas et al. 2001, 1; 2002, 1; Degryse 2002, 1457-1458; Patricio 1996, 104; Patricio and Van Balen 1993, 88-89; Van Gool et al. 2002, 53-55; Viaene et al. 1997, 406; Waelkens 1993b, 38; 1993c, 43-44; Waelkens et al. 1992, 81-82; 1997, 110).

Blocks and fragments were sorted out into typological families. A model was established from the part of the building that remained in situ with its constituent elements still intact. Extensive surveying of ruined components – topographic, graphic (figs. 206, 208), photographic, and written – was an extended method of information gathering. Once surveying was complete, connections between fragments and blocks were confirmed by experimental joining (figs. 209-210). Work continued with three-dimensional models on a 1:1 scale, built with original and
restored material. Conclusions were indicated in the graphic model. Materials used for gluing and completing stone fragments were laboratory-tested (figs. 207, 211). Natural stone was used for completions and additions, only when necessary for structural reasons. Joining of broken fragments was achieved by pinning fibreglass rods, anchored by epoxy grout through cracks. Fissured and flaking stone blocks were consolidated by injecting water-porous glues and sealed with a covering mortar. Restored blocks were cleaned by cold water and biological dirt was chemically cleansed (Ercan et al. 1997, 423-436; Patricio 1996, 104-107; Patricio et al. 2000, 400-416; Patricio and Van Balen 1993, 88-90; 1995, 143; Van Balen 2000, 213-217; Van Balen and Patricio 1995, 143-166; Van Balen et al. 1999, 105-113).

The first phase included gathering information, preparing material for restoration, and producing the theoretical reconstitution model (fig. 208a). The second phase led to anastylosis of some parts (fig. 212). The third phase started with restoration of damaged building blocks. In the last phase restored blocks were placed into position (figs. 198, 213). The architraves of the three porticoes and the cornices of the north and east portico were re-positioned; the west wall was completed with new stones; the basins, parapets, and steps from the west and east porticoes were dismantled and re-erected; the deformations of the foundations were corrected; and the original function of the structure as a fountain was recovered (Patricio 1996, 106; Patricio and Van Balen 1995, 143; Patricio et al. 2000, 399-417).

5.3.1.2 Observations and discussion

5.3.1.2.1 Analysis of objectives, and whether or not they were met
A principal objective of this anastylosis was that the monument provided research possibilities for archaeologists. It is in this sense that experts consider restoration projects as necessary for archaeological research (see Sagalassos Project 2002). As it will be shown below, extensive research was undertaken, while the planning and implementation of anastylosis resulted in gathering great amounts of archaeological and other information.
Chapter 5: Case studies from Turkey

An example of these research possibilities was the achieved restoration of the form and function of the monument (Sagalassos Project 2002; Patricio et al. 2000, 399). The anastylosis projects examined so far aimed at restoration of form only. Here, anastylosis was expanded as the water supply system of the fountain was re-established and put into function again. Restoration of the function of the building as a fountain house depended on the possibilities of archaeological and other research on the structure. This is the reason why this objective was considered by Waelkens (1993c, 43) as ‘a unique achievement in classical archaeology’. The only other similar example is provided by the restorations of ancient theatres and odeums, so that their original function is reinstated and ancient dramas can be performed.

Another aim of the anastylosis was the historic investigation which led to understanding the building (see Patricio and Van Balen 1993, 87-88). It comprised architectural and historic information and resulted in acquiring knowledge about the architecture and construction of the building. The restorers acknowledge that research on the monument before its reinstatement provided a unique opportunity to analyse and develop scientific knowledge on its architecture and the building techniques. It eventually concluded to understanding the initial concept of its architect and those who intervened over time (see Patricio and Van Balen 1993, 90; Patricio et al. 2000, 90). Thus, the knowledge deriving from scientific investigation is exhaustive and led to a well-informed anastylosis project.

Another reason and objective of the anastylosis was the awareness of the historic and aesthetic values of the remains (Patricio 1996, 107; Patricio and Van Balen 1993, 89) and their consequent enhancement. Evaluation derived from close observation and assessment of the remaining material and from detailed and accurate reconstitution drawings. Clearly, anastylosis assisted in augmenting these values. The Nymphaeum is more legible today and its values became easily distinguished. Its history could have been discerned even through its remains, since most original material survived in situ, but its aesthetic values are better understood and appreciated after the re-assembly of its dismembered elements. However, assessment of values was limited to only what concerned the building itself. This is a recent project, which should have not failed to acknowledge the importance of assessing the values related to the monument as part of a site and of the life of a community and a country. What is
important for the site should have been taken into consideration, whilst the public should have been included in the process.

However, the main principle and objective of the anastylosis was the return of surviving members to their original position with their own structural roles, as well as the preservation of the original structural behaviour of the building (see Erçan et al. 1997, 423-424; Patricio 1996, 103; Patricio et al. 2000, 399-408; Patricio and Van Balen 1993, 88; Van Balen 2000, 214-215; Van Balen et al. 1999, 106-109). Hence, gravity was placed on improving and preserving the structural system. Nothing else had such a dynamic in this anastylosis. Yet, the achievement of this objective cannot be assessed with certainty. The architecture of the fountain facilitates re-assembly of dispersed elements and preservation of the original static system. But, this is a technical matter that should be better judged by experts in the field. Further to that, the success of the implemented works will be proved in the unfortunate case of an earthquake or another mechanical force. In such an occasion, the structural system should behave in a way that will cause minimal damage to the Nymphaeum.

In general, the objectives of the restorers seem to have been met. Enriched research, improvement and preservation of the static system, re-assembly of surviving members on the building, and enhancement of the historic and aesthetic values of the monument have been achieved without major problems in the process.

5.3.1.2.2 Theoretical framework of the anastylosis works

The theoretical framework was governed by the principle that anastylosis should not be considered as a specific theory, but as similar to any other restoration. In this sense, it should correspond to fundamental principles generally valid for restoration. Restorers also sustained that each case must be studied individually, according to the state of preservation of the monument, which, in turn, will determine the amount and extent of intervention (see Patricio 1996, 101-102; Patricio and Van Balen 1993, 87). This is the first case study where the theoretical framework of the anastylosis was discussed from a different viewpoint than the others. Interestingly, anastylosis was not distanced from other types of intervention, but was considered equivalent to restoration. The individual needs of the monument, i.e. its state of preservation,
define the way in which it will be implemented. The only difference from any other kinds of restoration is the type of monument. In this case, the answer is ‘a totally or partially dismembered stone structure’ (Ercan et al. 1997, 423; Patricio 1996, 101-102; Patricio and Van Balen 1993; Van Balen et al. 1999, 106).

According to the restorers, the planning and implementation of anastylosis was based on restoration principles, technological research, weighted considerations, and technical and methodological actions, as well as understanding of the ruin (see Ercan et al. 1997, 423; Patricio 1996, 101-108; Patricio and Van Balen 1993, 87). Preparatory work was a significant step towards this process. It included information gathering from every possible source and formed an effective approach, encouraged by methodological delineation of the anastylosis process. Excavations were carried out and extensive research on architecture, as well as structural investigations led to further knowledge of the monument. The original form and alterations of the fountain house through time were clarified before proceeding with the intervention. It is also highlighted that detailed drawings uncovered aesthetic and historic values and information about the behaviour of the structure. Consequently, the monument was clearly understood. The idea of understanding the structure before implementing an intervention has been recently encouraged through the promotion of the notion of understanding the values of the monument (Clark 2001). In the Nymphaeum, understanding of architectural and structural issues enhanced understanding of historical values. Then, a methodology was developed (see Van Balen 2000, 212; Van Balen et al. 1999, 106) in order to systematise the intervention and define its amount, extent, and manner. This methodology, depending on scientific principles and technical procedures, had a systematic approach and became fundamental in the anastylosis planning, minimising possibilities of errors. Hence, the anastylosis project was thoroughly informed, planned and implemented. This practice is undertaken in most anastylosis projects, yet, its conduct varies in each case.

Interestingly, there was no speculation and questioning of the theoretical framework, just an extensive reference to the primary principles valid for the anastylosis. Respect of the theoretical principles depended solely on scientific experimentation and knowledge. The question that, consequently, emerges concerns the interdependence of theoretical framework and technical implantation and how one may occasionally
counterbalance the other. In this anastylosis, the theoretical framework was delineated to produce effective technical solutions and then it seems to have been left aside. Thus, it is reasonable to question why there was not much speculation of the theoretical problems of the intervention and what its impact would have been.

In light of the above, not much emphasis is paid to the *Venice Charter*, apart from mentioning the international conservation charters as the guides that define the principles of architectural restoration. Yet, the primary principles according to which anastylosis was planned and implemented derive from the charter. A difference is noted when the Nymphaeum project is compared to other case studies, where parts of the anastylosis studies analyse the principles followed in the proposed interventions. Therefore, once again, this case is distinguished for placing gravity mainly on technical matters rather than theoretical ones.

Preservation of the monument as a historic testimony, a principle of the *Venice Charter*, was a significant guide in the anastylosis works (see Patricio 1996, 101-104; Patricio and Van Balen 1993, 87-89). The restorers insisted that preservation of the historic values of the monument would be ensured by thoroughly surveying the individual members and the structural supporting system. Accordingly, the technical procedures were those that ensured the following of the theoretical framework. But the historic value of a monument is also a concept understood in a more general sense, such as its history and importance within the archaeological site and does not depend only on architecture and construction.

The general principles guiding the intervention declared that employed materials and techniques should not have adverse effects on the building. Intervention should be the minimum to satisfy structural purposes and to guarantee proper use, conservation, and prolongation of the life of the original fabric. Original material and construction system should be preserved (Ercan et al. 1997, 423-424; Patricio et al. 2000, 400-408; Van Balen 2000, 213-215; Van Balen et al. 1999, 106-109). Indeed, all materials were laboratory tested and experimentation proved their compatibility with the original materials of the structure. Techniques were carefully chosen in order to achieve the best possible results. Preservation of structural unity and care for the structural integrity of the monument were crucial considerations too. Hence,
consolidation of architectural elements took place with a view to earthquake resistance, since the monument is found in an earthquake zone. It did not aim at reinforcing the building but rather at controlling the damages caused by earthquakes. The consensus was towards connecting structural blocks, so as to withstand forces without damaging original members.

Most importantly, minimum intervention formed the guide that led the anastylosis approach (Ercan et al. 1997, 423; Patricio et al. 2000, 400-408). This principle currently forms the starting point of interventions, aiming at mainly preservation of the monument and, secondly, at its educational potential. In most cases, though, it seems to be almost a convention, rather than a strict principle of the undertaken actions, and, thus, often, the intervention easily becomes extensive. In the Nymphaeum, despite emphasis on technical matters, the intervention does not seem to extend to non-necessary completions or additions. However, it should be taken into account that a considerable amount of original material survived in relatively good state, thus its re-assembly with some necessary additions, only for structural reasons, took place to a reasonable extent.

Additionally, theoretical principles guiding the anastylosis were authenticity, reversibility, compatibility, and retreatability. These notions derive from the Venice Charter and the contemporary discussions on restoration (see Ercan et al. 1997, 423-424; Van Balen 2000, 214-215; Van Balen et al. 1999, 108-109).

Concerning authenticity, the attainability of the notion was reflected on preserving the original material and the structural system, relating them to authenticity of design, materials, and substance. Concern over authenticity also regarded the loss of traditional know-how, thus, emphasis was placed on employing traditional craftsmanship. In addition, combination of respect for authenticity and compatibility between new and original material instigated research with a view to composing an appropriate repair mortar (see Degryse 2002, 1457-1458; Viaene et al. 1997, 406). The reason for the emphasis on authenticity and compatibility derived from unsuccessful restoration projects and were abided to by employing science. This forms an effective link between restoration and science. However, the definition and
attainability of authenticity were not questioned. Technical methods were applied to achieve the best possible results.

Reversibility, which has been constantly encountered in the Greek case studies, was complemented with the notions of retreatability of treated surfaces and the compatibility of treatment materials. Specifically, compatibility entails that treatment materials will not have negative consequences and retreatability means that conservation would not preclude or impede future treatments (see Van Balen 2000, 211-215; Van Balen et al. 1999, 109). This principle of retreatability applied to anastylosis should be connected with the discussion on reversibility, as outlined in Chapter 2. The suggested principles enrich the concept of reversibility, by breaking it down into different aspects and regenerating it with introduction of new standards. That is particularly interesting, since it confirms the idea that reversibility is attainable if it acquires specific attributes. Taking into consideration theoretical questions regarding how reversibility is determined, whether it is attainable and whether it forms a valid principle in anastylosis, the technological potential provides the framework for its practical attainment.

These two suggested notions highlight the need for further criteria and standards in anastylosis. The Venice Charter is occasionally considered insufficient in guiding architectural restoration, though it still remains valuable. Professionals keep enriching the concept and practice of anastylosis with further principles, as in the Greek examples and the Sagalassos Nymphaeum.

5.3.1.2.3 Issues arising from the project

Although tourism is not projected as a valid reason for this anastylosis, it may have been a decisive factor in its decision and implementation. Indicative of this assumption is the fact that the Turkish Government granted permission for the project, possibly having considered the increase of tourism in the site, as it is located close to the holiday resort Antalya and Sagalassos has now become part of many cultural tours of the coast (see Sagalassos Project 2002). This is again a matter which touches upon sensitive issues that are not discussed openly by professionals. As the funding for the project derived from other sources, and not the Turkish state, thus
there was no financial gain, it probably did not affect any decisions on the manner and extent of the anastylosis. The restorers strongly highlight the individual needs of the specific monument having established their method of work. It is the end result, in combination with the urban conservation program undertaken in the whole site, that contributes to the increase of the number of tourists.

Further to that, interpretation and improvement of legibility, together with educational values, became valid reasons for this anastylosis, though not directly mentioned. The only reference made was the need to inform the public (see Patricio and Van Balen 1993), which was considered as a driving force of the works, similarly to most cases in which educational values are prioritised. Due to the lack of a visit to the site, the amount of information that is provided to the public cannot be discussed with certainty.

However, other matters related to public information and education can be commented upon. For instance, the 3D MURALE project, which tests multimedia applications for virtual anastylosis, is acknowledged for enhancing the educational values of the monument and giving a new dimension to the site visit (see Martens et al. 2000, 207). Visitors become able to understand what the monument looked like in the past, without professionals having to rely on extensive interventions. The role of education and interpretation can be weakened, as well as their abuse as valid reasons for anastylosis. The advantages and disadvantages of such a situation have not been properly researched and debated yet, as these applications are still under development and there are not many sites and museums that employ multimedia technology to such an extent. What has been so far projected as a significant concern is their function as a methodological tool for archaeological interpretation, since it is acknowledged that a simplified model of the reconstructed building may suffice for educational purposes (Martens et al. 2000, 206). Interestingly, although virtual reconstructions facilitate processes of education, interpretation and legibility, they are subject to similar questions and debates, such as alternative interpretations and the degree of differentiation between new and original members. The advantage of such approaches is that they are ‘intervention-free’. They do not affect the monument and its original materials, whilst authenticity is not a matter of concern.
Chapter 5: Case studies from Turkey

Regarding the management of the site, it should be noted that decisions on the preservation and presentation of the monument were made without excavations and further studies having been completed on the site (Sagalassos Division 2004, Waelkens and Vereenooghe 2003), as it has also been observed in Ephesus and Pergamon. These sites are enormous, they have revealed impressive findings and a great history through time, and their monuments have been thoroughly studied. However, the management of an archaeological site, apart from providing for individual monuments, should aim at preserving and presenting the site as a whole. In Sagalassos, an extensive urban conservation program (figs. 214-218) forms part of the annual excavation project, in order to preserve architectural remains and present the site to the public (Sagalassos Project 2002). After anastylosis of the Nymphaeum was completed, studies on the anastylosis and restoration of more monuments have been undertaken. Presentation of the site is further enhanced with a multimedia project that is currently in progress and aims at facilitating research at ancient Sagalassos and at presenting the site and its monuments to the public.

The archaeological excavation and study of Sagalassos began as a British project with active Belgian participation. The Belgian participation became dominant, both financially and practically (see Bracke 1993; Waelkens 1993a; 1993b; Waelkens and team 1997), after being given full-scale permission by the Turkish Ministry of Culture. It forms an excellent example of brilliant collaboration between foreign archaeological schools (Belgian and British) working in another country (Turkey). There are no references of difficulties and complications in the collaboration, neither among the participants nor among the participants and the host country. Many Turkish experts were involved in the project together with local workmen.

In terms of the general management and conservation plan, we can comment upon the reasons for excavating and restoring the Nymphaeum first before other monuments in the site. The main reason was it could clearly be distinguished from the beginning (Waelkens 1993c, 43). This indicates that archaeological and architectural studies and restoration works initiated in a monument that could be identified with certainty. Its state of preservation encouraged implementation of anastylosis since the majority of original material survived in situ in good condition. Thus, the reasons for its anastylosis were significantly related to technical matters.
Another significant matter concerns the reasons for choosing anastylosis among a wide range of types of architectural conservation. Starting point was the fact that the Nymphaeum was a dismembered stone structure with most of its elements surviving. The structure could be re-erected and the original elements could recover their original structural behaviour. Anastylosis was chosen with the justification of its international definition.

Further to that, anastylosis was selected as it was considered scientific investigation in the historiography of the building (see Patricio and Van Balen 1993, 87). This investigation comprised architectural and historic information that resulted in understanding the monument and delineating the intervention. This perception of anastylosis has also been encountered in the Library of Celsus in Ephesus. As one of the Library restorers is associated with the Nymphaeum restorers, it is understandable how certain views can have a wider impact. Generally, professionals view anastylosis as part of archaeology, yet nobody has classified it as scientific investigation. In this view, the role of anastylosis in understanding a monument and its features was credited as a learning process.

In this case study too, it is difficult to assess the accuracy of the data regarding the re-assembled members, the amount of new material, and so on. This difficulty has been explained in the monuments previously examined, but more impediments to this evaluation are related to the fact that I did not visit the site and did not examine the Nymphaeum closely.

Regarding the quality of documentation before, during, and after the intervention, a variety of publications provide information on the research undertaken in the monument and the site. A specific publication policy has been developed in order to cover all aspects of the interdisciplinary approach (see Waelkens 2000a, 7-8). However, information about the study, implementation, and final result of the anastylosis of the Nymphaeum is dispersed around many publications. This has been justified by the team in terms of the limitation or the general nature of the completed studies (see Waelkens 2000a, 8). The only specific study is an unpublished MA thesis (Patricio 1992), on the methodology created and applied by the architect in

The collaborating disciplines range from archaeology, architecture, geology, cartography, ancient history, architectural restoration, illustration, geomorphology, conservation, photography to computer technology, and virtual archaeology (Martens et al. 2000, 205; Sagalassos Project 2002; Waelkens 1993a, 10; 2000a, 7; Waelkens and Owens 1994, 169; Waelkens et al. 1992, 79). Research studies were undertaken within the interdisciplinary approach advocated in the Sagalassos project. Thus, the project, which includes conservation and management of the whole site, rather than of the Nymphaeum anastylosis only, should be praised for the multiplicity of collaborating disciplines. Emphasis is placed on harmonious collaborations for scientifically-based results in understanding, researching, preserving, and presenting a site and its monuments. The team also takes praise in making the whole project interdisciplinary. This approach underlines how professionals worked and with what aims and objectives. All disciplines played a significant role in formulation of ideas and production of conclusive results on the site where the monument exists. The interdisciplinary approach resolved confusions created by different interpretations provided by different disciplines. An example is the study of building stones whose results were differently interpreted by geologists compared to architects and engineers (see Van Balen and Patricio 1995, 65).

Other technical issues refer to studies, experimentation and laboratory analyses undertaken in order to decide upon compatible materials for re-integrations and connections. Experimentation used samples of stones, so as to avoid damaging the surviving ones, indicating respect for the original material. The choices were explained through presentation of laboratory experiments, while financial reasons were openly discussed. Decisions indicate that expensive solutions were avoided as much as possible, though they were adopted, if no other choices existed (e.g. epoxy mortar was decided only for small fragments because it is expensive). Study of the most proper connecting material formed the topic of research of one of the engineers (see Ercan 1995). In this case, some theoretical concerns reinforced the rationale of the financial and technical aspects of the adopted solutions.
Remarkably, there is no reference on the quantity of surviving material. Assurances are given on the enormous amount of original material surviving *in situ* or around the monument, but no concrete information is provided. Lack of information, in terms of figures or locations, is also noted with relation to the amount of new material utilised for completing missing parts. The general consensus confided on assembling as much as possible original material and minimising additions and on the extent of intervention depending on the amount of surviving material. Additionally, although the Nymphaeum had four building phases, there is not much clarification of which phase in its history was represented and for what reasons. However, lack of information on such matters does not provide clear understanding of the intervention on the specific monument.

Natural stone was used as it is not expensive in Turkey, its long-term durability is known, is highly compatible from the aesthetic and structural points of view, and its carving took into account traditional tools and craftsmanship. The final surface carving was integrated into the ancient one to guarantee satisfactory aesthetic results without violating the principle of differentiation among new and original elements.

In addition, the planning of the works presented some problems, such as the safety measures that were taken since was relatively hazardous for both workers and visitors and the seasonal contact with the site (see Patricio 1996, 104-108; Patricio and Van Balen 1993, 89-90). This aspect is rarely referred to in the published sources of anastylosis projects, yet, knowledge of ways to handle problems is important for assisting future projects to take place without major impediments. On the other hand, provisions for maintenance work are underlined (see Patricio 1996, 104-108; Patricio and Van Balen 1993, 89-90). So far, only in the Erechtheion, maintenance and conservation activities are planned for the future. Here, emphasis was placed on the continuous maintenance work and temporary conservation and protection measures in order to care for the monument after its restoration. This also forms a principle of the *Venice Charter* but is rarely followed in practice.
CHAPTER 6: PROFESSIONAL AND VISITOR SURVEYS

The results of the survey undertaken among heritage and anastylosis professionals are presented and discussed in the first part (6.1). The second part (6.2) outlines the results of the visitor survey.

6.1 The professional survey and its results

As presented in Chapter 1, a survey was conducted among professionals in order to identify issues raised from planning and implementing anastylosis, as well as to compare and analyse practices. The survey was planned and conducted with the aim of exploring the views of professionals and in accordance to general survey rules (see De Vaus 2002, Fink 1995, Newman and McNeil 1998). The survey objectives evolved around the identification and exploration of issues regarding the choice, planning and implementation of anastylosis. The instruments selected for gathering data were self-administered questionnaires, interviews, and mail correspondence. The standardised process in designing and administering the survey and its instruments was followed. Inclusion criteria for selecting survey participants were followed, together with the appropriate sampling methods. In this chapter, the collected data is presented and analysed according to the identified major issues of anastylosis and the set research objectives of the survey.

Anastylosis practitioners and heritage professionals were approached. National and regional organisations and services in Greece, Italy, and Turkey responsible for protection and conservation of archaeological monuments, as well as international heritage organisations, were contacted in request of response to the questionnaire or provision, among others, of contact details of professionals and practitioners (Appendix G2). Some professionals positively responded to the survey, some did not wish to take part, while a few found it difficult to respond to specific questions. In meetings with professionals, it was possible to draw conclusions regarding their reluctance to participate or to discuss the matter and clarify their positions.
In total, twenty-three professionals responded to the questionnaire (Appendix G1.1). Among them were nine architects, four architect-restorers, two archaeologists, an architect-architectural conservation consultant, an architect-heritage consultant, an archaeologist-architect, a civil engineer, a heritage consultant, an art historian, a conservator-restorer, and an anthropologist-psychoanalyst. Three of them were from Germany (university, archaeological organisation working in Turkey); one from a Finnish university; two from the UK (university, private practice); four from Italy (archaeological service, university); two from the USA (university, heritage organisation); two from a Belgian university; one from an archaeological service in the Lebanon; one from an Austrian university; three from a Turkish university; one from a restoration service in Malta; one working in private practice in Cyprus; and one with international experience.

Those with whom interviews and discussions took place are fourteen (Appendix G1.2), specifically six architects, five archaeologists, an architect-archaeologist, a civil engineer, and an archaeologist-restoration architect. They were from universities, restoration committees, central restoration services, and archaeological organisations in Greece. One was from a Turkish university. Those who corresponded with the researcher were five (Appendix G1.3): a restoration architect, a conservator, a heritage consultant, an archaeologist, and an archaeologist-historical architect. Two of them work in Greece, one is member of a foreign archaeological organisation working in the Middle East, one works at a Turkish university, and one at a British art institute.

The questionnaire was divided into six sections (Appendix B1). Each section dealt with the multitude of issues related to anastylosis. The questionnaire included relevant issues and extracted as much possible information regarding current practices and trends. Emphasis was placed on acquisition of a variety of opinions with a view to compiling diverse ideas and practices.

In this Chapter, the results from the answered questionnaires are analysed. Answers are classified according to each question, succeeded by their detailed presentation and analysis. Groups of questions are comparatively examined, thus, major aspects are explored and assessed. Comments are surveyed in relation to each question that
instigated them, as well as in a wider context. Analysis of the discussions is performed in accordance with the main issues identified in the questionnaire. The aim focuses on providing the general picture of anastylosis and highlighting important issues deriving from its definition and applications.

In presenting the results of the survey, each sub-heading shows from which questions the results derive; the two numbers given in brackets are the number of participants who chose that option and the number of those who answered the question; words or phrases in inverted commas are comments by the participants extracted either from the questionnaire or the general correspondence.

6.1.1 Determination of anastylosis as a concept and as a practice
This section attempts to determine anastylosis as a concept and practice of architectural conservation. Its relation to restoration and reconstruction, the possibility of its existence as an intervention applied to monuments in particular geographical locations, the importance of a more complex and detailed definition of the method than the one provided by the *Venice Charter* of 1964, and its stance in the international conservation vocabulary are explored. This group of questions attempts to clarify what anastylosis means and whether and how it is distinguished from other architectural conservation methods.

6.1.1.1 Anastylosis in relation to restoration and reconstruction
(questions 1, 2)
Anastylosis is considered as either a method of restoration (9/23) or reconstruction (9/23). Those who believe that is the most proper restoration method (2/23) appear less than those who believe that it is the most proper reconstruction method (4/23). Anastylosis is also characterised as 'a restoration technique based on a very specific restoration philosophy'. Additionally, some professionals believe that anastylosis is an amalgamation of restoration and reconstruction (5/23).

A respondent provides another definition of anastylosis, according to which 'if only original pieces are used, it can be considered a restoration, but if new materials are introduced, it is a reconstruction, and that is usually the case'. The question raised from this statement concerns the practical impossibility of re-assembling a
monument without inserting, even in small amounts, new material, either as integrations or as connecting material. However, it is discreetly acknowledged that ‘under the label of anastylosis, there can be reconstructions that use mostly new material, which certainly is not the intention’.

Factors that differentiate and equate anastylosis, restoration, and reconstruction are explored. Twenty participants conclude that the structure of monuments (7, 9, and 5 respectively1, out of 20) and the type of original material (7, 5 and 2 respectively, out of 20) play an important role in all three methods. The state of preservation is taken into account in anastylosis (6/20) and restoration (10/20). Availability of original material is a significant matter mostly in anastylosis (14/20) and less in restoration (7/20). Introduction of new material is a major reconstruction feature (13/20), though some is included in anastylosis (5/20) and in restoration (6/20). Surface conservation (11/20) and protection against weathering and pollution (9/20) are significant features of reconstruction.

In anastylosis, restoration and reconstruction, the manner (13, 11 and 7 respectively, out of 20) and variation (7, 9 and 4 respectively, out of 20) of intervention, and the guiding principles (7, 9 and 8 respectively, out of 20) are almost equally significant. On the other hand, as sustained by an archaeologist, ‘it is not necessary to distinguish between anastylosis and restoration’, their only difference being that ‘restoration has the meaning of restoration of the form of the monument’. However, while ‘anastylosis has a similar tendency... the material does not permit it’. In case of dispersed members and dismantled monuments, ‘you employ anastylosis but you end up restoring because there is nothing in front of you’. It becomes apparent that anastylosis is not clearly defined and the concept lingers between restoration and reconstruction.

6.1.1.2 Definition of anastylosis with relation to the structure and geographical location of the monuments
(questions 2, 3, 14)

Identifying the main factors taken into account when implementing anastylosis, availability of original material (14/20), the structure of the monument (7/20), the

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1 7, 9, and 5 respectively means 7 for anastylosis, 9 for restoration, and 5 for reconstruction
type of original material (7/20), and the state of preservation (6/20) appear as determinative ones, according to the opinions of twenty professionals. A participant underlines the introduction of new material, identified in the question too (5/20), as a prerequisite to re-assemble fallen members. As stated by an architect, 'anastylosis is often abused by introduction of too much new material'. Generally, anastylosis is considered as a particular type of intervention (13/20), which shows variation (7/20) and has certain principles (7/20).

Emphasis is placed on the structure of monuments on which anastylosis can be applied. It is not apparent in the questionnaire – anastylosis can be applied equally to any kind of monument or monuments with autonomous members (6 and 8 respectively, out of 19) – but it becomes clear through the majority of comments. According to them, anastylosis is mainly compliant with monuments structured by individual architectural members connected with dry joints, if necessary, but without mortar. Monuments that fall on this category are those of classical antiquity.

The overwhelming majority of participants consent that anastylosis can be applied in monuments throughout the world (19/20), though they have to consist of 'autonomous parts', as clarified by an architect practising anastylosis. Since it is implemented to 'a specific type of monuments in which the Mediterranean region is richest in', we encounter monuments subjected to anastylosis mainly in Mediterranean countries. That does not exclude monuments with similar architecture found elsewhere in the world, 'for example in Cambodia'.

6.1.1.3 Architectural conservation vocabulary

As put by a heritage professional, the definition of anastylosis with regard to restoration and reconstruction 'is a semantics game'. An architect-restorer acknowledges the difficulty 'to put some definitions in a limited classification'. An archaeologist affirms that 'these meanings do not have absolute validity', while another participant states that 'such blanket definitions are quite meaningless and what is anastylosis for one type of structure may be restoration for another'.

An archaeologist ascertains that 'in international terminology, the term has the meaning of re-assembly, which is certainly compatible with monuments structured
with dry joints'. Notably, in the Greek conservation vocabulary, as affirmed by most Greek professionals, anastylosis is a wider notion, comprising various degrees of intervention. A heritage professional certifies that ‘in the *Venice Charter* the definition of anastylosis could be taken as the official one… but the international interpretation of the word does not necessarily correspond to the Greek meaning’. That gets even more complicated, as an architect clarifies that in archaeological conservation practice in Greece ‘the distinction between αναστήλωσις and αναστύλωσις implies restoration and re-assembly respectively’ but we should take into account that ‘re-assembly is part of restoration’.

Additionally, another architect sustains that ‘in the English school, restoration has a pejorative meaning, as unnecessary intervention to the extent of falsification and reconstruction, yet, lately it is not that severely interpreted’. Nevertheless, ‘the Italian school, from the 1930s to the 1980s, interpreted restoration as the umbrella term of any intervention to cultural heritage’. She describes the line of the Turkish restoration school, according to which ‘restoration is not one type of intervention, but it covers all, from consolidation to anastylosis’.

The Austrian restoration school defines anastylosis according to the *Venice Charter*. Introduction of new elements is reduced to ‘the minimum necessary for static reasons and for keeping the continuity of the aesthetic form of the monument’. Restoration is defined as the intervention aimed at ‘re-establishing the aesthetic unity’ of the monument, while reconstruction is considered ‘the model in 1:1 scale of a lost monument or a part of it’. This indicates a willingness to define interventions undertaken in monuments and ensure clearly defined approaches.

### 6.1.1.4 The concept of anastylosis

(question 13)

It appears that anastylosis is, and should be, in parallel a matter of abstract discussion of principles, presentation and application of principles, and application of the method (9/22). It is a technical solution, but consists of a theoretical framework too. A small number of participants consider it a matter of presentation and application of principles (6/22) or of technical application (9/22). A participant describes it as ‘the last chance to study a monument as a historical source and document in a detailed
way’. It is ‘a research method, not an application’ according to an architect. Emphasis is placed on ‘our scientific knowledge of the structure and the way it has been erected’. Others declare the importance to evaluate the structure and assess the significance of the monument. As characteristically advocated by a Greek archaeologist, ‘the why is the basic argument and up to what extent becomes the second argument’. The why would determine the decision and it actually entails ‘a careful analysis of values’ of the monument in question.

6.1.2 Theoretical and philosophical issues raised by the concept and practice of anastylosis, and examination of the role of driving forces

This section enquires after the theoretical framework embracing anastylosis and assesses the driving forces of the practice. Questions include the reasons for anastylosis applications and issues of integrity, authenticity, interpretation, preservation of historic memory, and respect of the values attached to monuments. The role and significance of the driving forces are investigated.

6.1.2.1 Reasons for anastylosis implementation

(question 5)

The main reason for applying anastylosis is the survival of original material (20/22). Other reasons include reinstatement of the form of the monument (14/22), followed by facilitation of architectural studies (14/22) — notably most participants are architects — and aesthetic reasons (12/22). Structural stability of the monument (11/22) is emphasised in the discussions. Retention of the monument as material culture (11/22) plays a significant role too. A restoration architect asserts that the values of the environment and the surroundings and the aim of recovering the vertical dimension within the site are also valid reasons.

From the discussions undertaken with various professionals, survival of original material was projected as the principal anastylosis incentive. Although it forms a primary differentiating factor between anastylosis, restoration and reconstruction, it was not emphasised enough in the specific question. Two archaeologists ascertain the knowledge of the monument, its material, its stability and condition as primary considerations. It is also agreed that ‘anastylosis cannot be looked at in isolation...but in the context of other decisions taken’.
6.1.2.2 Driving forces of anastylosis implementation
(questions 6-8)
The main driving forces, identified by twenty respondents, are interpretation (17/20), improvement of legibility (16/20), and education (15/20), together with tourism (13/20) and cultural identity (12/20). However, improvement of legibility (13/20) and interpretation (9/20) are acknowledged as more influential. Interpretation can equally influence decisions, either strongly (9/20) or weakly (8/20), while education (11/20), tourism (10/20), interpretation (8/20), and national (5/20) and cultural (6/20) identity appear not to instigate anastylosis decisions as easily.

These are taken to be the primary forces, and, though unanimously accepted as justifiable, 'their abuse as an excuse' is conceded. It is argued, by an archaeologist, that 'educational values should not be used as an argument' for anastylosis as they can be achieved by other means. This is probably why an architect admits the importance of acquiring 'a balance between improvement of form and achievement of education without distorting the form of the monument'.

The whole discussion on driving forces gave the stimulus to professionals to analyse them further with regard to historic and sociological views. According to a participant, the significance of national identity for archaeological and architectural conservation is identified from the beginning of conservation and throughout its diffusion in European countries in the 19th century, 'the age of formulation of national states'. Reasons for emphasising national identity through anastylosis are found in that 'protection and restoration of monuments directly provide us with an image of the monumental richness of the country and help the establishment and reinforcement of identity... It is a twofold relationship. In Greece, it is identified with projection of classical heritage; in other countries with any heritage considered national'. National and cultural identity, viewed as significant elements of the socio-cultural context, may have different results as driving forces when a native is restoring a monument of his/her ancestral heritage versus restoration by a non-native, as sustained by an archaeologist. He adds: 'for a Greek person the issue of restoring a Hellenistic monument is completely different than it is for a Lebanese person'. It is
also acknowledged that the archaeological heritage of a nation ‘is bound to be subject to biases’ when monuments of different periods co-exist in the same site.

As far as tourism is concerned, it is upheld by an architect that ‘tourism influences governments’ rather than professionals. Tourism has become a driving force ever since ‘the 1960’s with the industrial revolution, the end of the war, and the tourism development’. With regard to the creation of jobs and funding availability, opinions are contrasting. Creation of jobs (12/20) seems not to be considered much in such projects. Funding availability does not have a clear role (3 strongly, 6 weakly, 3 not at all, out of 20) as it is regarded ‘of a different nature from the other criteria’. Heritage conservation and preservation, systematisation of the environment, and structural stability were assumed as driving forces in anastylosis too.

It is also suggested by a heritage consultant, that ‘the reasons behind anastylosis works are seldom explicitly stated, and when they are, they are not real ones’. Another professional indicates that anastylosis is often taken as political justification for any type of intervention, which ‘gives the form desired by those taking care of the project. Obviously, hypotheses can easily deviate from a historically reliable interpretation’. A conservator emphasises the fact that ‘it is all sacrificed for the current agenda, either tourism or someone’s vision of the monument’, but as far as tourism is concerned ‘there is no reliable data. Despite tourists being constantly projected as a reason, they are essentially mute’.

The issue entails that driving forces can be so intertwined that none takes priority and they become equally sound justifications. For example, according to an archaeologist, restoration and anastylosis works in the 1960’s in Lebanon were undertaken ‘because there was budget available from US Aid. Afterwards, the sites were used as tourist attractions and became focal points in the tourism policy and sometimes in cultural and national identity’.

Around the Mediterranean, sites and monuments in Greece, Italy, Turkey, Libya, Lebanon, Jordan and Egypt, subjected to restoration and anastylosis projects, are influenced by a variety of driving forces. The same is valid for sites and monuments in the East, north-eastern Europe and America, specifically in Germany, Czech
Republic, Iran, Iraq, Angkor, Bolivia, Mexico, USA and Canada. Restoration of monuments in Greece, especially those of the Athenian Acropolis, is influenced by the above-determined driving forces, particularly national and cultural identity. In Turkey various sites are mentioned, such as Ephesus, Pergamon, Sagalassos, Aphrodisias, where education, interpretation, and tourism played a significant role, while funding availability influenced decisions in Sagalassos and Aphrodisias.

When faced with the possibility of an ‘ideal’ anastylosis project, according to twenty-two professionals, structural stability is undoubtedly the major driving force. According to a heritage consultant, it ‘should always be considered’. Interpretation, education, and tourism certainly influence decisions. Cultural identity is preferred, compared to national identity, while funding availability and creation of jobs would affect an ‘ideal’ anastylosis. Professionals also suggest conservation and better presentation, aesthetics, evocative power of the monument, nature of available material, research, study, and documentation as aspects that should be considered.

6.1.2.3 Respect for values in anastylosis  
(questions 9-11)

Professionals underline that, despite driving forces and reasons for anastylosis, everything should ‘depend on the values assigned to the structure’. In this framework, the values of monuments are classified according to respect shown to them before and during the intervention. All identified values are taken into consideration in anastylosis projects. According to eighteen participants, the most respected ones are historic (16/18), scientific (16/18) and cultural (15/18), as well as the authenticity of the place (15/18). The significance of the monument for the history of art and its historicity should be taken into consideration, as an architect and an archaeologist clarify. Valid contributions of all periods (13/18), integrity (13/18), material authenticity (13/18), authenticity of workmanship (12/18), original material (12/18), and aesthetic values are prioritised too, together with artistic (11/18) and contextual (11/18) values, as well as design authenticity (11/18) and traditional setting (10/18). Only economic values are not highly esteemed by professionals (1/18). All of them are regarded significant aspects of anastylosis decisions and ‘the question is about striking a balance’ among them. ‘The various aspects need to be judged on the basis of heritage and context’, as affirmed by some participants.
Despite the above, it is pointed out that in archaeological sites throughout the world ‘we can find examples of anastylosis justified for all reasons or values. But these interventions are justifiable only if in the process they do not destroy other values’.

Authenticity and integrity of monuments are seriously considered, according to twenty-one professionals. Though emphasis is placed on their absolute respect, it is acknowledged that they are compromised: ‘Obviously anything you built on a monument will affect it’, since ‘the integrity of the monument and the authenticity of materials can be destroyed or re-valourised’. It is not clear whether consent is towards a serious (9 integrity and 10 authenticity, out of 21) or partial compromise (10 integrity and 9 authenticity, out of 21).

Nonetheless, ‘integrity of the site’ is differentiated from ‘integrity of the monument’, with the former being considered more important. Similarly, authenticity is classified in four categories. Authenticity of the place (15/18) and material authenticity (13/18) form significant aspects, whereas authenticity of workmanship (12/18) and design (11/18) are seen as slightly less important by eighteen respondents. Authenticity of workmanship is related to the use of traditional and ancient tools and techniques.

Remarkably, when questioned about what is of higher priority in anastylosis, most professionals choose authenticity and integrity of the monument (10/22). A heritage consultant insinuates that this happens ‘if we are interested in conservation, but not everybody is’. Preservation of historic memory (7/22) and structural stability (5/22) influence decisions too. As another professional states, ‘structural stability should not and cannot be an option’. Moreover, although interpretation and education appear as major driving forces, they are not considered a high priority at all.

6.1.2.4 Principles of anastylosis interventions – reversibility
(question 12)

Regarding the notion of reversibility in anastylosis interventions, debates arise on its relativity. It is specified that different kinds of reversibility, such as reversibility ‘of structure’ and ‘of restored blocks’, should be viewed separately, especially since they have different degrees of attainability (reversibility of the structure is possible, reversibility of the restored blocks is not). Another professional discusses the
relativity of the principle by giving the example of the possibility to correct errors of past interventions. In this sense, reversibility exists, but is not accepted and desired as such. Hence, despite being considered as a concept with relative value, it is generally regarded as attainable (8/21). This is explained by the fact that the architecture of monuments that can be subjected to anastylosis is offered for reversible treatments, since from the ancient times it was possible to dismantle and re-assemble these structures. An architect, among the twenty-one respondents to the question, regards that reversibility can be achieved, if there are 'perfect impressions of surfaces before anything starts and there is no intervention on architectural members'. Another participant confirms that in anastylosis of ancient Greek monuments, 'it is possible to attain reversibility to a great degree, with exhaustive documentation'. Yet, an equal amount of professionals (8/21) are not sure about the issue. A few others (4/21) believe that reversibility is pertinent, since it depends on each case, being a 'subject too complicated to be so linear', while 'no complete observance' exists, particularly in extended interventions. A civil engineer speculates that 'the principle of reversibility is by nature doubtful, since, from the first moment of creation of the monument, its life starts, together with its weathering. Therefore...we have the question about the time life of monuments towards which reversibility itself should take effect'.

6.1.2.5 Influences on anastylosis interventions and practices

Many participants underline the variety of influences on anastylosis practices. These influences derive initially from two identified trends, a conservative and a more radical one, according to an archaeologist and an architect. The former ‘requests to leave monuments as found’ and the latter ‘focuses on social values, in which case the monuments are transformed into Disneylands’. As maintained by a restoration architect, the Italian and Spanish professionals form a school that draws its main ideas from the Italian philosophical systems developed from the 19th century and influencing the Mediterranean countries. In Greece, an archaeologist affirms, recurrent practice of anastylosis in numerous classical monuments has resulted in improved approaches and experience. However, among restored monuments, the diversity of the aesthetic perceptions of the responsible restorers and the hands of different craftsmen are bound to influence the conduct of works. At the same time, in Turkey, foreign archaeological schools are mainly responsible for employed methods
and approaches, despite some control exercised by archaeological authorities. In the last twenty years, ‘anastylosis of classical architecture has been particularly fashionable, shifting towards reconstruction’.

6.1.3 Technical issues in anastylosis implementation

The technicalities of anastylosis implementation are scrutinised. The possible necessity of determining a percentage of original material that justifies the practice, the initial state of preservation, and the use of eroded or weathered fragments are investigated. The choice of natural or artificial new material, the reasoning for its use, and its differentiation from the original are surveyed. Issues of the use of connecting material, ancient working tools, new or traditional methods and techniques, and of the ancient structural system, are challenged.

6.1.3.1 The role of the state of preservation of the monument and the use of eroded and weathered fragments

(questions 16, 19, 20)

The state of preservation of the monument and its material are considerable aspects of anastylosis. This is affirmed almost unanimously (21/22) by participants, since, if the monument or its material are not preserved in a good state, then ‘the structure cannot be understood’ and it is ‘impossible to re-assemble its degraded parts’.

The use of eroded and weathered fragments has produced debates, as it forms a challenging problem. There is uncertainty on that matter. Some practitioners (7/15) tend to use them, some others (5/15) object to their use, and a small number (3/15) is uncertain. Main reasons for not using them are that they are bound to surplus of intervention (3/15), they destroy the perfections of the lines of the building (1/15), and can falsify the integrity of the monument (1/15). Everything depends on their actual condition and state of erosion, their amount, structural stability, importance as building elements, on the context, and on the condition of other building elements. Besides, the intervention aims and the respect for authenticity should be major considerations before any decision is made. The fact that ‘each case must be judged individually’ entails that ‘general criteria cannot and should not exist’.
6.1.3.2 The surviving amount of original material
(question 15)

Although availability of original material is a decisive factor in anastylosis, it seems that practitioners are divided (10 yes and 10 no, out of 20) with regard to establishing an acceptable percentage of surviving material. They argue that this percentage cannot be certified because it 'would make little sense in trying to re-assemble a structure where little or no material survives', as 'the majority of original material should be present'. Indicative is the answer of an architect who considers such ideas as 'naive'. According to another participant, 'anastylosis can be applied to the extent that the amount of material permits it'. Hence, everything 'depends on each case', so 'no rule can be given'. Specifically, it depends on the state of preservation of the original material, the structural stability of the monument, as well as on the accurate knowledge of its initial form. Some architects clarify that percentages can be assessed according to surface, as 'the upper surfaces of the stones are needed for the anastylosis argumentation, and the surfaces of the building are needed for aesthetic reasons'. They can also be assessed according to volume and weight. An architect maintains that we cannot talk about percentages in anastylosis project but rather 'about levels of anastylosis depending on the quantity and typology of the existing material'. The strongest argument is articulated by a civil engineer who believes that 'anastylosis...is part of a holistic perspective on preserving values'.

However, in an attempt to estimate a justifiable percentage, most suggestions focus on a minimum amount of 70% to 80% of original material and a maximum amount of 20% to 30% of new material (6/10). Few accept a 60% original and 40% new material (2/10). Nobody suggested anything lower than that. Generally, 'use of new material is undertaken in small-scale only if it restores the form of large architectural members. Its extended use, in the sense of creating copies of old members in new material, is not recommended'.

6.1.3.3 The use of new material in re-integrations
(questions 21, 22)

Seventeen professionals reveal their opinions regarding the material that should be used in completions and additions. Their majority (12/17) consents that natural stone is the most appropriate choice. Some professionals underline that new material has to
be similar and compatible to the original; its choice depends on each case and has to be made accordingly. From a technical point of view, a civil engineer admonishes that ‘everything depends on the structural or presentation-related role of additions’.

The principal reasons for choosing natural stone are its material compatibility with the original one (16/18), in relation to the fact that artificial stone can be materially incompatible (11/18). As an archaeologist clarifies, ‘extensive use of new materials, especially the products of the chemical industry, in the 1960s and 1970s, caused many damages in monuments’. This is why the use of traditional materials, ‘compatible to the physico-chemical features of monuments’, is promoted. Aesthetically satisfying results (8/18), philosophical concerns (5/18) and the contribution of the natural stone to reading the structure as a whole (5/18) are significant reasons too. Another incentive is the greater durability of the natural stone (1/18), plus, artificial stone endangers the autonomy of architectural members (4/18). However, natural stone should be used ‘with reservations, as new stones will not match the original ones until they have decades of weathering’.

Those who support the use of artificial stone (5/17) argue that it can be produced and worked on easily and speedily (7/18), while it eases the differentiation between old and new material (6/18). Some architects question this argument about easy and fast production and workability. Furthermore, artificial stone provides optimal adhesion to the original one (3/18) and its compatibility with the historic fabric can be tested (3/18). Other reasons include comparative cost benefits (3/18), possibly in relation to the fact that ‘natural stone is often economically unfeasible’. However, opinions are contrasting, since, according to another participant, artificial stone can be more expensive. Philosophical concerns (2/18), lack of trained stonemasons (1/18), and the fact that some examples of its use, as in the Priene theatres, have proved excellent, contribute to its choice too. ‘Enormous technical advances’ in its production guarantee its efficient use. An architect warns that artificial stone ‘should be weaker than the original in the interest of conservation’.

Some professionals argue that this matter ‘depends on each case’. Both options can be good and their ‘choice depends on the type of original stone, on weathering conditions (snow, pollution, etc.), and the budget and philosophy of the project.
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Those who tend to use natural stone may occasionally use artificial 'in non visible parts, such as the interior of walls'. In many cases, natural stone can derive from the same quarry the original material was extracted (as in the Acropolis of Athens and other sites).

6.1.3.4 Differentiation of new and original material
(questions 17, 18)
New material, used together with the original, should be harmonious with the whole but differentiable upon close inspection (18/21). This is a principle enforced by the Venice Charter (Article 12) and professionals are in agreement with this requirement. Only two, from twenty-one respondents, believe that it should simply be visually harmonious, while an architect maintains that 'physical and chemical compatibility is more important than visual harmony'.

For achieving differentiation, numerous methods are employed, either individually or in combination. Most common ones appear to be the different texture (12/19), abstraction of details (8/19), and different composition material (7/19). New members may also bear a contemporary stamp or identifying mark (7/19) or be distinguished with the aid of modern technology and multimedia (7/19), though the latter will widely be achieved 'eventually'. Other methods are also used, maybe not to great extent: different colour (5/19) or explanatory labels (4/19). Professionals highlight the relativity of choices, indicating that they depend on the monument and the original structure.

6.1.3.5 The ancient supporting system and the connection of new and original architectural elements
(questions 23-25)
The ancient supporting system is almost unanimously (16/19) followed, if possible, since 'the structural scheme bears heritage values and is also part of the monument'. Past experiences – especially in cases of 'integrating stronger constructions' – have proved that, if it is not followed, problems will arise in the future and the monument will be endangered. It was also underlined that if the ancient static system is not followed, then the intervention is reconstruction and not anastylosis, which 'intends
to reinstate the form and structural behaviour’ of the monument. Suggestions focus on detailing and evaluating each case ‘to bring the solution’.

Emphasis on the *possibility* of following the ancient supporting system indicates that, while in theory it is attainable, in practice it may be difficult to achieve. An archaeologist commenting on the role of civil engineers, who decide on issues of structural stability, objects to the use of an earthquake possibility as a point of reference, as ‘it entails alteration of the initial structural form’. He draws attention to the ancient creators who used limited connecting joints and how capable of withstanding these forces the monuments were made. Only after people intervened in the monuments, their static stability was decreased.

For connecting new and original elements, material similar to original joining material or nothing, if nothing was used originally, appears to be the best option (11/19). New joints with laboratory tested materials are also used (7/19). Recently, discussions about employing the same materials used in antiquity (steel embedded with lead) have initiated with regard to the Parthenon anastylosis, as confirmed by a Greek archaeologist. Participants emphasise the importance of considering factors, such as scale, type of connection, and efficiency, before any decision. Laboratory-tested materials are accepted, given their efficiency. They should only be employed ‘for joining broken parts of one element, not two independent elements’.

Titanium rods and pins (15/19) are widespread, followed by epoxy glues (14/19) and fibreglass rods and pins (13/19). Steel rods and pins (7/19) and cement (5/19) are still used, despite problems presented in the past. It was also affirmed that combinations of steel and concrete created corrosion problems, due to oxidisation of steel which caused swelling of the cement. Cement is generally incompatible with stone. As pointed out by an architect, cement mortars used in recent examples, such as the Acropolis monuments, have a specific composition, without salts and with a special kind of sand, in order to avoid future damages. Other laboratory-tested materials are stainless steel; cement mortar, which can be easiest, safest, and occasionally reversible; carbonate rods; bronze; wood; epoxy mortars; hydraulic lime; fibreglass mats. Their choice should depend on the ‘role of the added material’, ‘the original material’, ‘the load on the structure’, and ‘the problems and needs of the structure’.
They should be carefully selected and tested and able to be replaced if needed. They should also be used in a way that they 'break before the original stone'.

6.1.3.6 Use of traditional or new methods and techniques and of ancient or modern working tools
(questions 26-29)

This issue is interrelated with achieving authenticity in workmanship, a principle well-respected. Nevertheless, it is argued that in anastylosis of ancient monuments, 'we are not trying to preserve techniques but a structure; we do not deal with traditional settlements'. So, if the intervention is to learn about working techniques, 'then the work should be designed accordingly'.

In this framework, the results indicate no preference on either traditional or modern tools. Most professionals believe that it might not necessarily be 'a matter of principle but a matter where the decision depends' on various factors, among them 'the purpose of intervention' and 'the desirable result'. Ancient working tools are preferred, at least 'in principle', because they achieve authenticity in workmanship (6/18) and assure best results (6/18). They are also accurate (1/18) and contribute in studying the ancient techniques (1/18).

Other anastylosis practitioners are slightly sceptical about modern tools, but most of them judge them as efficient, as they 'can be as good as ancient ones'. In anastylosis 'no imitation' is needed. Modern tools are chosen principally for their accuracy (9/18) and the fact that training in the old craft of working the stone is not needed (5/18). Another argument is centred on the fact that modern tools are sometimes better (1/18) and more economic (2/18) than ancient ones.

Despite these, most participants maintain that their choice depends on particular circumstances, and, as a heritage professional remarks: 'often...in the eastern Mediterranean, modern masons still use traditional tools'.

New and traditional methods and techniques are both employed (18/21), in accordance to 'the specific needs of each case'. Twenty-one participants consider them both to achieve impressive results in terms of homogeneity, compatibility,
minimum intervention, and reversibility. Traditional methods and techniques are preferred for the same reasons as traditional tools – achievement of authenticity of workmanship (9/18) and better results (6/18). They are considered to constitute a professional approach (5/18), which follows the requisitions of the latest restoration theories (3/18). Other reasons are their giving of information on original solutions (1/18), resulting in authentic-looking textures (1/18), and ensuring better integration of new material (1/18).

Conversely, new methods and techniques have the advantages of easy (7/19) and fast (4/19) use, while being cost-effective (6/19). Further reasons projected are their giving understanding of values (1/19) and their guaranteeing of safety (1/19), better preservation of the original structure (1/19), better results (1/19), better stability to the monument (1/19), and possible compatibility (1/19) too. Interestingly, they reflect the contemporary intervention (2/19), because, by leaving modern tooling marks on hidden surfaces, the recent intervention can be distinguished in the future.

6.1.4 Anastylosis and the International Conservation Charters

This section focuses on examination of charters that set the theoretical framework and the principles overseeing interventions. A series of charters in relation to anastylosis were presented among the choices. Interpretation of their principles or delineation of extra principles indicate the lucidity, or not, and significance of these documents. Possible problems encountered during the interventions are explored.

6.1.4.1 Which charter provides best for anastylosis implementation; which was followed

(questions 30, 31)

According to the opinions heard, the charter that provides best for anastylosis implementation is the *Venice Charter* of 1964 (12/18). Other charters are preferred too, sometimes in combination with the above-mentioned one. These are the *Burra Charter* of 1999 (5/18), the *Athens Charter* of 1931 (4/18), the *ICOMOS Charter for Protection and Management of Archaeological Heritage* of 1990 (3/18), the *Nara Document on Authenticity* of 1994 (3/18). Some Italian participants mention the *Restoration Charter of Rome* of 1972 (1/18) and the *Italian Charter of Restoration* of 1931 (3/18), with the oldest version being the prevailing one. All charters are
considered 'generalising rules', which, 'if followed blindly, can lead to awful results'. They cannot provide for each monument individually, because 'each monument is unique and presents specific problems and needs' and 'should be approached as a unique instance, with common sense and integrity'. In addition, it is suggested that, since 'each charter gives some of the aspects' of restoration, what is needed is 'to put all of them together in a new one'.

In the various anastylosis projects undertaken by the participants, the Venice Charter (13/13) was unanimously followed. Few of them preferred the Charter of Rome (4/13) and the ICOMOS Charter for Protection and Management of Archaeological Heritage (4/13). Others followed the Italian Charter of Restoration (3/13), the Nara Document of Authenticity (3/13) and the Athens Charter (2/13). It should be noted that some charters were used in combination and that some professionals chose different charters for different projects. An architect characteristically states that he did not use any of them. Furthermore, according to a heritage professional, 'charters are seldom used as a guideline. Often they are used as an excuse!'. The Venice Charter was employed with free interpretation of principles (10/13) or together with delineation of extra principles (3/13). All other charters were either subjected to free interpretation of principles so that the best possible results would be obtained (the Charter of Rome, the ICOMOS Charter for Protection and Management of Archaeological Heritage, and the Nara Document on Authenticity) or accompanied by extra principles emerging from the specific needs of monuments (Italian Charter for Restoration, Charter of Rome, Declaration of Amsterdam).

6.1.4.2 Assessment of the charters: sufficiency in guidance; advantages and disadvantages; problems encountered; need for redefinition of anastylosis in them
(questions 32-35, 4)

The employed charters were assessed with regard to their sufficiency in planning and executing anastylosis. Professionals express contradictory views; some believe that they are sufficient without presenting any major problems (5/18) and others that they can improve (5/18). Remarkably, only one participant sustains their absolute efficiency. Most of them (6/18) are perplexed, and this became 'the reason that extra principles were established'. It is indicated that planning and executing anastylosis
'is not something you would learn from a charter' and that 'charters were not really intended to be guides' but rather 'lines of principles'. A participant interestingly suggests that charters 'could not possibly' provide guidance in interventions.

The main advantages of the charters employed as guides in anastylosis appear to be exactly the provision of a theoretical framework (13/18) and their quite old but still valid principles (7/18). Yet, provision of adequate guidance (4/18) and flexibility of interpretation (2/18) are considered indications of their prevalence. Moreover, these charters 'contribute to respect towards the monument'. It is affirmed that the charters 'are good as general frameworks', but it should be kept in mind that 'every kind of monument is different'. Their projected disadvantages consist of their generality (12/18), focus on theoretical approaches (5/18), and lack of clarity (4/18). Participants highlight their inadequacy, non-necessity, occasional difficulty in applying them, and limitations when try to follow their principles one by one, as well as the need to update them.

An architect sustains that the Venice Charter fails 'to appreciate the different values a historic building may possess' and another affirms that 'it is vague even in its reference to anastylosis', whereas it focuses only 'on stone architecture'. Further opinions were expressed during interviews and discussions with professionals. What derives from all these, is the view that the Venice Charter 'is good and useful as a general framework, but needs specifications' or 'a kind of reform in the future'.

An interesting comment comes from an architect who advocates that 'it is fine to provide a theoretical framework, not guidance'. This is also declared by another architect who sustains that the charters are general but useful, because 'they regurgitate the older restoration principles with regard to requests for aesthetics and historicity' and because of 'the uniqueness of monuments'. Hence, they should remain 'our general theoretical framework', because 'every case of restoration is totally unique'. According to a civil engineer, the best practice would be 'the minimum possible violation of rules for the best possible results on the monument', something that entails 'discreet interventions'.
In almost all cases (11/15), respondents confirm that problems were encountered in anastylosis implementation according to the particular conservation charters. Some state that the problems were many (4/15), others that they were minor (3/15) and some that problems emerged only occasionally (4/15). Only a few (4/15) of them declare absolute smoothness of interventions.

The main problems encountered are related to the variation of interpretation of principles by the professionals involved (13/16), almost equally characterised as major (6/16) and minor ones (7/16). Decisions imposed by financial issues (8/16) and difficulties in co-operation of multiple disciplines (7/16) appear to some extent. Bureaucratic issues (5/16) are quoted too. Other considerable impediments to the completion of projects are aesthetic problems, the uniqueness of each case, the non-coverage of the needs of the site by the charters, the rare technical preparation of operations, and the practical application itself. The need to define the objectives of the projects and the way in which the working methods contributed to getting results and preserving values indicate that 'there is no unique way to intervene'.

The need for redefining anastylosis in the Venice Charter was questioned. Despite the fact that some professionals (6/23) do not deem it important, the majority of them (10/23) agree with the inclusion of a more complex and thorough, yet flexible definition, mainly with regard to the type of material, the connection of architectural elements and the objectives of the practice. Concurrently, there are responses (7/23) arguing the dispensability and triviality of something like that, because ‘the question is less of a definition and more of an understanding’ of the method and ‘the way it is practised’. As a heritage professional states, ‘anastylosis is a restoration method, which has been clearly, though briefly, defined in the Venice Charter. This could be taken as the official definition, and there does not seem to be any reason to deviate from it’. Additionally, two anastylosis practitioners sustain that the definitions of the Burra Charter are confusing and ambiguous.

6.1.5 Management aspects and procedures for anastylosis decisions and implementation

The procedure for approval of anastylosis decisions and its assessment are investigated, whilst the co-operation of which disciplines is determined.
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6.1.5.1 Identification and assessment of approval procedures
(questions 36, 37)
The most common procedures for approving anastylosis proposals appear to be the establishment of a specific directorate (17/19) at regional (5/17), national (8/17) and international (4/17) levels. Decision-making multi-disciplinary boards (9/19) at all levels (regional 3/9, national 2/9, international 4/9) are also employed. Multi-step processes (6/19) are common at all levels (regional 2/6, national 2/6, international 2/6). It should be kept in mind, though, that procedures differ from country to country. Each country has a different system, and, normally, ‘decisions are prepared locally and sometimes confirmed by state authorities at national or central levels’, but rarely internationally. Even within a country they might differentiate ‘given the importance of the building and the site’.

These procedures are acknowledged as efficient to some extent (9/18), yet, a professional deems them as rather slow. Some participants (4/18) perceive them as not efficient. Nobody presumes their competence, while few participants (4/18) choose not to comment, indicating a possible unsatisfactory assessment.

6.1.5.2 Co-operation of disciplines
(question 38)
Regarding the disciplines co-operating in the framework of multi-disciplinary approaches, archaeology (19/22), architecture (19/22) and conservation (19/22) are the most significant ones. Structural (14/22) and civil engineering (7/22), together with site (14/22) and heritage (7/22) management contribute in most cases. Geology (7/22), policy and planning (5/22), and information systems (4/22) are not employed that often. Besides, an emerging field is public relations for sponsoring the works. It is probably employed in cases where funding cannot be provided by the state itself or the relevant authority. In the past, one or two disciplines co-operated, archaeologists or architects or even civil engineers, for instance in the restorations of the Acropolis monuments in Athens or of monuments in the Lebanon.

Some professionals believe that the multidisciplinary committees should be careful in their role, as archaeology is a humanistic discipline and, thus, it should respect the
values of the monuments. Hence, anastylosis is projected as an extension of archaeology. Furthermore, the role of civil engineering in anastylosis is clarified by a professional who indicates that its ‘aim is the reduction of apertures with consideration of increased resistance and construction quality, so that a concrete stone member will be created’. Balance is achieved between the ‘respect towards the monument and the rules of technique and structure’.

6.1.6 The way forward
This section attempts to determine whether the establishment of a methodological approach or an amendment to an existing charter is needed and, if so, what it should comprise. Should it focus on theoretical, philosophical, or technical issues?

6.1.6.1 What professionals believe regarding a more efficient anastylosis practice
(questions 39-41)
Architectural conservation professionals appear almost divided between those who wish (8/18) for a new charter or an amendment to the existing charters, regarding anastylosis, and those who disagree with that (8/18). An architect, utterly disagreeing with that prospect, enhances his objections by underlining that the whole issue ‘is a matter of principles and is related to case studies and common knowledge’. Only two of those surveyed appear slightly sceptical about it, whereas an architect believes that it ‘is probably too late’.

Those who wish for a new charter or an amendment, suggest that it should comprise a methodological approach to monuments (7/10), a delineation of anastylosis limits (6/10), and determination of principles (5/10). Two participants emphasise the need for ‘a definition of the term anastylosis in the modern world of archaeological conservation’, which could consider ‘possibilities in virtual media’.

In distinguishing among theoretical, philosophical, and technical aspects, the ranking of importance places priority on philosophical issues (5x1 2, out of 11). Theoretical (4x2 and 2x1, out of 11) and technical issues (4x3 and 4x2, out of 11) follow.

2 (5x1, out of 11) it means that out of 11 respondents, five ranked the specific topic as number 1.
6.1.6.2 Alternative suggestions
(questions 42, 43)

Those who wish for specific solutions, according to their experiences and observations, present excellent suggestions.

Regarding procedures of proposal and implementation of anastylosis, multidisciplinary boards, at national and international levels, are strongly recommended. International committees, involved in organising meetings of anastylosis professionals with the aim of exchange of experience, are projected as an efficient tool. Involvement of all relevant bodies in anastylosis decisions is considered a holistic approach, which can result in thorough and informed actions. Another suggestion concerns the simplification of bureaucratic procedures which cause delay of action for various reasons, either due to romantic views of restoration or due to ‘supposedly’ better control. By introducing simple, clear, and quick procedures in terms of a unified system of control of studies and works, anastylosis works will be implemented efficiently, without delays at the expense of monuments.

Guidelines can have the same, if not more competent, effect as a new charter or an amendment. An architect calls for national recommendations. No matter in what level they are introduced, the idea is to have the form of either a set of principles with flexibility of interpretation or technical and scientific instructions or appendices – since the theoretical approaches are still valid – or application manuals and case studies based on charters. In case of technical recommendations, they should include detailed guidelines for deciding anastylosis on the basis of a certain amount of surviving material. These should emphasise not the kind of material to be used, but the fact that the materials used for integration should be compatible and laboratory-tested. A professional suggests inclusion of anastylosis limits and what practitioners should not do, as well as a monograph on intervention ethics.

Attention should be paid to the participation of archaeologists and their education in relation to conservation (conservation courses in the archaeological curriculum) to warrant co-operation and understanding among disciplines. In addition, those responsible for anastylosis should be educated and be informed about aesthetics.
Professionals agree that publications can be effective and guide our interventions to archaeological monuments. For each case they should clarify the arguments and methods and evaluate the contribution to heritage preservation. They can analyse – both from philosophical and technical viewpoints – anastylosis work that has been undertaken, while discuss and debate theoretical aspects. Further publications of concluded works and evaluation of results, in terms of unfortunate examples and exceptional works, could highlight problematic aspects of anastylosis to interested professionals. Besides, thorough analysis of proposed interventions can be carried out by publishing the anastylosis studies before the works take place.

Other suggestions include the placing of emphasis on virtual anastylosis. This is suggested by more than one professional and indicates the abilities of modern technology. In that way, interventions will become flexible and easily disseminated.

Passionate views focus on new approaches to conservation in general. These approaches should be ‘value-based’ and ‘principle-based’ or ‘rules-based’. That entails ‘assessment of the monument and its values: what are the values attributed to the creators of certain monuments and what are the values held by those who have inherited the monuments’. If these values contradict each other, ‘what should be done is to reduce the cost of contradiction and assess which value should be projected’. There are ways so that ‘the consequences of ignoring values are minimal and the monument does not become an enemy of society’.

6.1.6.3 Further comments
With relation to the unsuccessful attempts to contact restoration organisations and services, either national or international, a few remarks can be made, according to my personal interpretation. The result could indicate lack of organisation, as no answer was ever received. Refusal to answer the questionnaire could be attributed to a certain indifference to research that may not have direct results or be generally favoured. This insinuates the need for transparent operations and procedures and the creation of archives open to anyone interested, for well-informed research.
As far as individuals are concerned, their refusal to participate in the survey can denote, apart from lack of time or busy periods, a certain disagreement with the research topic or doubt of its necessity or the importance of its results. That was occasionally admitted by those who reluctantly participated. In those cases, disagreement was based on the fact that there cannot be anything more specific to anastylosis rather than the Venice Charter. According to these opinions, the theoretical framework provided by the charter is sufficient for practitioners. What is important is the experience gained by professionals working on monuments. This experience becomes common knowledge in each country, especially when the responsible groups of people implementing anastylosis publish their results regularly or undertake more than one project.

Regarding those who agreed to participate but did not manage to answer, the reasons were analytically explained and in most cases they were similar. Among those reasons was the feeling that the questionnaire was only addressed to anastylosis practitioners. That is partly correct, since a great part of the questionnaire examines technical issues of anastylosis implementation, so to complete the relevant sections, respondents would have to have practised anastylosis. On the other hand, the questionnaire was designed so as to simply give the stimulus to discuss further the raised issues. The other reason appearing frequently was the fact that, as put by a professional, 'the issues you are trying to grapple with are not amenable to such questions'. According to the explanations, anastylosis depends on a variety of factors, either related to the monument, its structural needs, and its state of preservation or to the values attributed to it or the context in which decisions are made. Suggestions focused on approaching specific examples to explore the raised issues in depth. The latter was achieved with the case studies. Occasionally, the decision not to respond may have been related to political sensitivities, given the context on which those professionals operate or have operated. Finally, for some professionals questions were either too personal or too theoretical.
6.2 The visitor survey and its results

6.2.1 Introduction
A questionnaire was developed, in the framework of a so-called visitor survey, in order to explore the views and opinions of the public visiting monuments subjected to anastylosis. It was undertaken in a small scale in order to give the bigger picture of the public opinion and underline the importance of such surveys in heritage conservation. Its objective was to address the understanding of conservation and anastylosis by the public, the issue of driving forces, in terms of their acknowledgement and approval, as well as the public's eagerness to get involved in such projects and be provided with information on the undertaken works.

The survey took place within three different archaeological sites: the Athenian Acropolis, the Acropolis of Lindos at Rhodes – both in Greece – and the site of Ephesus in Turkey, whose monuments also formed my case studies. Questionnaires were completed near the archaeological site or outside the area. Visitors were provided with information about the reasons of the survey, and questioned about their willingness to participate in it.

The answers to the questionnaire are analysed individually and in groups identifying the main issues. The analysis offers an insight into the view of the public, and can enlighten professionals about the need of addressing the public in anastylosis activities.

6.2.2 Demographic elements
(questions 15-18)
In total, 85 people visiting archaeological sites in Greece and Turkey were questioned. Most of the people who were surveyed live in Greece (59/85), while a few (22/85) in the UK. The rest (4/85) come from the USA, Ireland, and Belgium. More than half (51/85) are women, while men are less (34/85). It was attempted to cover as much the age range as possible. However, almost half of them (40/85) are in the age range of 25-34 and over a quarter (23/85) between 19 and 24. The rest (22/85) of them were over 34. Some participants had completed their full-time education at the age of the 18 (17/85), some after first degree or diploma (33/85),
some after a postgraduate degree (23/85), while the remainder (12/85) were still at full-time education. Generally, the answers come from a wide range of people; this is not enough to qualify for a proper visitor sample, but it strives for a relative representation.

The reason for referring to the demographic data is that, in attempting to establish who the survey was aimed at, the decision was to include an equal number of national, including local, and international visitors. Despite not attempting to conduct a professional visitor survey, it was felt that it should include as representative a sample as possible. Obviously, participants did not equally represent national and international visitors. Their answers highlight the fact that there is not great divergence regarding the opinions of the public, especially with regard to issues of national/cultural identity and tourism.

6.2.3 Understanding anastylosis

(questions 1-3, 9, 13)

For the public, it seems that anastylosis is either repair (42/85) or reconstruction (43/85). Visitors appear divided regarding how they perceive anastylosis and whether it involves repair of structures or simply their rebuilding. Hence, two opposing notions are attributed to the same method. That may signify that anastylosis is considered to cover a wide variety of interventions or that varying extents of anastylosis differentiate it as repair or rebuilding.

Most of those questioned (61/85) had visited other monuments subjected to anastylosis. When asked to name these places, they mentioned examples from Greece and the Mediterranean. Not all mentioned monuments have been subjected to anastylosis; some are indicative reconstructions and restorations. According to them, the most important monuments, in which anastylosis has been implemented, in Greece are: the Treasury of Athenians at Delphi, the monuments of the Acropolis of Athens, the Hellenistic Stoa at Lindos, the temple of Hera at Samos, the temple of Apollo at Bassai in the Peloponnese, the theatre of Thasos, the monuments in ancient Olympia. In Turkey, the most popular ones are the monuments of Ephesus, while in Italy, the temples of Selinunte. Famous restoration examples presented as anastylosis are those undertaken in the Arch of Galerius and the monuments of the Agora in
Thessaloniki, the Acrotiri at Thira in Santorini, and the Rotonda in Thessaloniki. The Arch of Titus and various monuments in Rome and in Pompei are recorded as subjected to anastylosis too. The Stoa of Attalos in the Athenian Agora and the Palace of Knossos in Crete, two famous reconstruction examples, are mentioned.

When faced with the question of what a successful anastylosis would involve, the public is divided between conservation of architectural members (45/85) and preservation of the monument as found (28/85). Use of original material (39/85) and stabilisation of the structure (37/85) are among the prerequisites for a successful anastylosis. Making the monument look as it was originally (40/85) and completing missing parts with new material (24/85) are also considered important features.

The above-mentioned confirm the fact that, for the public, anastylosis is an intervention, no matter what its form is. Nobody seems to distinguish among restoration, reconstruction and anastylosis. The extent of intervention determines successful results. The fact that there is no observed tendency of what is considered successful, or not, is more related to aesthetic preferences rather than to understanding of intervention methods.

Regarding the visitors' evaluation of the result of a restoration, it seems that most of them (38/85) are not convinced that a restored monument seems normal or fake. Some find it normal (33/85) and some (15/85) believe that the monument looks fake. A certain tendency of how the final result is judged can be distinguished. It was expected that the public would be equally divided in their opinions. Yet, no matter what degree of intervention is preferred, the affirmative conclusion is that there is always the danger of making the monument look fake and not as a testimony of its former glory. That indicates that professionals need to be more conscious of their approaches to monuments and how these are finally presented to the public.

6.2.4 Anastylosis, driving forces, and the public
(questions 4-8, 11, 14)

The majority of respondents (73/85) indicated that they would feel pleased and proud if a monument near their home was restored. That could explain the emphasis placed on national and cultural identity by those who undertake anastylosis and restoration.
Chapter 6: Surveys

It is indicative of the tendencies of the public to support restoration work that elevates monuments in their areas. In this sense, anastylosis, and all other forms of restoration, attracts their interest by reinforcing their identities.

Most visitors (59/85) seem to believe in an individual's knowledge of archaeology and architecture to understand a ruined monument. Hence, a great number of people may not be able to familiarise themselves with monuments left un-restored. Thus, restoration and anastylosis facilitate understanding of monuments.

Additionally, the public answers that interpretation deriving from a restored monument could educate them about historic values (61/85), architecture (58/85) and archaeology (51/85). Every person questioned feels that it is important to preserve the historic record and stories about the monument, which entails that its historicity is the most significant aspect in restoration. However, aesthetic (29/85) and artistic (21/85) values are not considered that important. The answers relate education with improvement of legibility and interpretation, rather than spiritual pleasure from enhancing the aesthetic and artistic qualities of the archaeological heritage.

The majority of participants (78/85) believe that anastylosis and archaeological site conservation attracts more tourists to a site, and, interestingly, they (72/85) would be happy in such cases. Only a small number (8/85) disagrees with such a choice. This is remarkable, since it indicates scepticism and awareness regarding the occasional catastrophic influence of tourism in monument preservation.

When the public was faced with the choice of driving forces to hypothetically guide them in anastylosis decisions, reinforcement of national and cultural identity (41/85), together with education about archaeology (41/85) appear as favourable options. Enhancement of the values of the monument (25/85) was considered a valid reason. Tourism (14/85) and creation of jobs (8/85) do not seem respected considerations.

The priority given to the national and cultural identity of the people and the advancement of their archaeological education in relation to anastylosis is explained by the fact that those questioned agree that a restored monument would make them feel pleased and proud. Possibilities of education would be among their primary
options if they would hypothetically undertake restoration projects. Artistic and aesthetic values of monuments would not be principal aims if the visiting public were responsible for anastylosis works. Professionals who project these values when planning anastylosis should keep that in mind. In addition, even though most visitors are happy with the increase of tourist numbers in restored monuments, they would not use it as an argument in anastylosis nor allow it to influence their decisions.

In general, the public seems consistent in what they wish in anastylosis and its effects and they would aim towards different values and objectives compared to the professionals. This creates the need for further research on exploring the public opinions on our approaches to archaeological and architectural heritage.

6.2.5 Preferences
(questions 10, 12)
When presented with the question about the best choice in architectural conservation, the visiting public seems to linger between a monument subjected to anastylosis (36/85) and a monument presented as found (28/85). Reconstruction (13/85) or presentation of the monument in small replicas or with the aid of modern technology (13/85) also form options of some visitors.

Even though the public appears somewhat confused in what they believe anastylosis and restoration are and what they consider as a successful anastylosis, they are certain in what they wish for a monument. No major interventions or technological aids are favoured, though some kind of intervention becomes their best choice. They are slightly contradictory in what they expect and understand, indicating that it probably depends on each case.

When faced with the choice of being consulted about why they value a monument, before any conservation decision, the public responds positively (63/85). That is probably attributed to their willingness to participate in the conservation decision-making and an interest in contributing by having their opinions heard. It was quite clear that the majority wants to be part of such projects, although their involvement was not specified. The public is a great driving force in anastylosis, and is the one least actively considered. Professionals declare that everything is done for the
monuments and the public, but the public does not seem to have an opinion, and apparently they would be pleased to have one. However, the benefits of such an involvement would be enormous. Visitors are advocates of conservation and their contribution can be more than valuable for the monuments and their survival in time.
CHAPTER 7: DISCUSSION OF THE ISSUES RAISED FROM THE CONCEPT AND PRACTICE OF ANASTYLOSIS

Issues raised by anastylosis as a concept and practice, identified by the literature review and explored through the case studies and the professional and visitor surveys are comparatively examined in accordance to the fulfilment of the specific objectives of the thesis (as specified in Chapter 1).

7.1 What is the historical background of anastylosis?

The historical overview of anastylosis is presented in Chapter 3. Accordingly, anastylosis first appeared as a concept related to Christian art in the 1st century AD. In the 20th century the term was re-introduced in *The Athens Charter* (1931). Since then, anastylosis has taken its place within the international architectural conservation vocabulary and restoration practices.

Throughout the 20th century, anastylosis was implemented as a form of architectural conservation in the Mediterranean region. Among the Greek examples (Athenian Acropolis and Acropolis of Lindos in Rhodes) anastylosis projects were carried out. At that time, variable perceptions of national identity guided the projects. A series of theoretical and technical matters emerge from examining these case studies.

Specifically, materials, such as concrete and mortar, which caused deterioration of monuments, were employed in past projects. Members were displaced, distorted by chiselling and damaged by insertion of metal, which corroded. Surviving elements were re-assembled in an unsystematic manner falsifying the form of the monument, while the structural system was altered. Thus, urgent measures are required to avert the consequences of past interventions. The monuments are dismantled, their deteriorated members conserved and then re-assembled in their original locations, if they can be established.
The employed materials were products of the latest technological advances and were endorsed by the then theoretical framework, yet, they proved damaging for the structures. Thus, questions on the employed technology should be raised, while experimentation needs to be exercised before implementing anastylosis. Fortunately, due to the technological advances themselves, the durability and future behaviour of new materials can now be tested.

A limited amount of disciplines – mainly archaeology and architecture, and occasionally civil engineering – co-operated during the past projects. Now, the field of anastylosis is enriched with the collaboration of a wide range of disciplines (from archaeology to computer technology and heritage management).

Another issue in the comparison between past and current practices refers to the recording and documentation of the monument, before and after anastylosis, and of the process itself. This may causes serious problems, as in the case of the minimal and largely incorrect documentation faced by the current restorers of the Lindos Stoa.

Despite problematic matters, it is rightly acknowledged by professionals that the past projects contributed in preserving monuments in a state which they would not possibly have now if they were left un-restored. Additionally, constant practice of the method resulted in acquisition of valuable experiences and in improved approaches.

Regarding the most recent anastylosis projects, only a few differences are noted between the approaches of the 1970's, when anastylosis was officially endorsed internationally, and the current ones. Primarily, the disciplines involved have gradually become varied. This is expected, as the Venice Charter (1964) endorsed collaboration of diverse fields of expertise while a certain progress in multidisciplinary approaches is confirmed in practice.

Accordingly, differences and similarities between past and recent anastylosis interventions are a result of advances in heritage management and restoration theories, and the development of modern technology. The significance of the monument remains the determinative factor for the time, effort, and financial resources allocated for its anastylosis.
7.2 What does the concept and practice of anastylosis currently entail?

Anastylosis is an intervention strategy, decided and implemented as part of site management. Numerous issues related to the anastylosis of the examined monuments and highlighted in the professional survey contribute to reaching this conclusion. Abiding by the international theoretical framework of heritage management when implementing anastylosis is emphasised by professionals (survey). Among the currently followed charters are the *Burra Charter* (1999), which endorses respect for the values and significance of heritage, and the *ICOMOS Charter for the Protection and Management of Archaeological Heritage* (1990), which incorporates conservation and restoration into the wider field of heritage management. Understandably, anastylosis becomes part of the general strategy for managing and restoring archaeological heritage.

In all case studies anastylosis is undertaken to preserve the monument and tackle issues of structural stability and protection against deterioration. Essentially, it also aims at improving the legibility of the structure and presenting it in an educational manner so that it will be better understood by visitors and the general public.

Furthermore, anastylosis decisions do not necessarily involve only re-assembly of members. For instance, architectural sculptures are removed to museums (Erechtheion, Parthenon) due to adverse weather conditions and atmospheric pollution; structural members are displayed or stored near the monument (Lindos Stoa, Trajaneum); non-valuable material is removed and historical phases are preserved (Erechtheion, Parthenon, Lindos Stoa, Celsus Library, Trajaneum, Sagalassos Nymphaeum). In addition, decisions on re-assembling members of the monument (Avaton, Lindos Stoa) found in second usage necessitate consideration of the future of the other monuments. As a consequence, matters are raised that can only be decided with an overall view of the monument and the site in which it is found, which is exactly the target matter of heritage management.

The extent to which preservation and presentation issues influence the extent of anastylosis becomes a matter of speculation and, sometimes, indecision or even decision towards extensive interventions. For resolving this issue, identification and
assessmet of the values of the monument in question are necessary. Their assessment and consequent respect and enhancement is confirmed in the professional survey too. This is connected with the values attributed to the entire site, in which the monument is found. An indicative example is presented by the Lindos Stoa whose values correspond to the values of the other monuments in the site. Besides, the archaeological and historical values of a site may be enhanced through its restored monuments. For instance, anastylosis of the Avaton and the Propylon of the Gymnasium were decided upon the grounds of elevating the sacred space and defining the boundaries of the ancient sanctuary of Epidauros.

Anastylosis as part of management planning relates to a wide variety of issues raised in the exploration of the case studies and which will be discussed further below (7.6). In general, anastylosis planning and implementation does not just address the individual monument, but also the site in which the monument is located. These considerations can only be tackled with management provisions.

As shown in the case studies and as confirmed by the results of the professional survey, anastylosis is applied in accordance to the international restoration framework. Respect for the values attributed to the monument and their consequent enhancement is a significant approach. The driving forces of anastylosis are almost identical to the driving forces of every conservation and restoration intervention. Authenticity, in all its facets, and integrity are notions seriously considered during anastylosis implementations. The principles of anastylosis, including minimum intervention, and the theoretical contemplation of technical matters derive from the international restoration theory.

In almost all case studies the Venice Charter (1964) is the main guiding document, with most of its articles being closely followed and providing the international theoretical framework. Anastylosis implemented according to the charter is particularly highlighted by the restorers of the Erechtheion and the Celsus Library. As the works were undertaken in the 1970’s, the charter was the ultimate representation of the evolved restoration theory. In the recent examples (Parthenon, Lindos Stoa, Trajaneurn), it becomes apparent that, despite doubts about the
usefulness of the charter as a guide, it still forms a valid theoretical framework for the planning and implementation of anastylosis.

Flexibility in abiding by its principles and relativity in interpreting its articles so as to make them more applicable to the anastylosis of each monument is confirmed by professionals participating in the survey. Their assessment of the employed charters stresses that charters are not exactly guides but rather sets of principles. Accordingly, their overly theoretical approaches generate problems when principles are put into practice. This was clearly the case in the Propylon of Epidauros, where difficulties in following the theoretical principles of the charter were admitted. Thus, the individuality of the monument becomes a fundamental consideration in anastylosis; even more in anastylosis of previously restored monuments (Erechtheion, Parthenon, Lindos Stoa). As a consequence, problematic matters are identified in the application of theoretical principles in practice, indicating the need for their clarification for improving the practice of anastylosis and confirming the ideas sustained by Brandi (1996b, 341) and Carbonara (1996, 237) (see Chapter 2.2).

Even in those examples where there was no reference to the Venice Charter (Trajaneum, Sagalassos Nymphaeum) the theories guiding the intervention are directly related to it. Professionals participating in the survey confirm that the charter that provides best for anastylosis implementation is the Venice Charter. The validity of the current restoration philosophy and theory, its articulation within the specific charter, and its relation with anastylosis become apparent.

Other charters that mention anastylosis – such as the Athens Charter (1931), the Restoration Charter of Rome (1972) and the Italian Charter of Restoration (1931) – as well as charters regarding heritage management and conservation issues, including the understanding and respect of authenticity and values, – the Burra Charter (1999), the ICOMOS Charter for Protection and Management of Archaeological Heritage (1990), the Nara Document on Authenticity (1994) – are also referred in the professional survey. According to the experts, some of these charters were followed in the anastylosis projects they were involved with, though this was not identified in the case studies.
Chapter 7: Discussion

In the Greek examples and the Nymphaeum at Sagalassos, addition of further principles when applying anastylosis is common, as highlighted by professionals in the survey too. These principles were formulated in accordance to the needs of classical monuments (preservation of the structural system with the individual members and their static sufficiency) and monuments subjected to anastylosis before (minimum alteration of their appearance, respect for the past restoration as a historic event), as well as the general restoration theory (reversibility, improvement of legibility, minimum intervention). Thus, an identified need for enriching the concept of anastylosis with further principles deriving from the international restoration theory and the specific requirements of monuments emerges. Guidelines specific to anastylosis could facilitate its planning and implementation, while problematic matters and the ways in which they are resolved could be identified.

Another acknowledged necessity in anastylosis, highlighted in the professional survey, is its redefinition within the charters in a more complex, yet flexible, manner that clarifies the type of material, the connection of architectural elements and the objectives of the intervention and, hence, contributes to understanding the concept and the practice.

From examination of the case studies and their comparison with the results of the professional survey, it is confirmed that anastylosis is a type of architectural conservation and monument presentation. Increase of structural stability, protection of exposed surfaces, as well as arrest of deterioration through re-integration of architectural and structural members in the building contribute to conserving and preserving the monument. In addition, the legibility of the monument is improved, its form is indicated and, in turn, its historical, archaeological, and artistic values are enhanced. Similarly, its educational values, which refer to both the public and the scholars involved in the project and their understanding of the form and architecture of the monument, are increased. In this regard, anastylosis of the Sagalassos Nymphaeum and restoration of its function provided research possibilities.

Multiple reasons, presented throughout the case studies and the professional survey, justify the choice of anastylosis among the wide range of conservation and presentation methods. Accordingly, a fundamental reason is the amount of surviving
material, as projected by the experts, who also regard it as the differentiating factor among anastylosis, restoration, and reconstruction (professional survey). In the Parthenon, the Avaton, the Sagalassos Nymphaeum and the Celsus Library, the good state of preservation of the original material was crucial too.

In two case studies (Trajaneum, Sagalassos Nymphaeum) anastylosis was chosen because the existing dismembered parts of the monument could be re-assembled. This reason is strongly connected to aspects of anastylosis being implemented in monuments of a specific structure, as it will be indicated below.

For previously restored monuments (Erechtheion, Parthenon, Lindos Stoa), reasons for selecting anastylosis were the need to stabilise the monument and the method itself, which reflects actions of dismantling and re-assembling randomly compiled and newly discovered members. As dismantled members require conservation, combination of anastylosis and conservation provide for the exact needs of the monuments.

Anastylosis is also chosen for increasing or preserving the static stability of the structure, as highlighted in the Parthenon, the Lindos Stoa, the Sagalassos Nymphaeum, and in the professional survey. Dispersed members are further protected if they are re-integrated onto the structure (Avaton, Propylon, Celsus Library, Trajaneum). Improvement of legibility of the monument forms another crucial consideration (Parthenon, Celsus Library, professional survey). The latter is closely related with enhancing the values of ruined or previously restored monuments, namely educational (Parthenon, Celsus Library, Sagalassos Nymphaeum), architectural (Epidauros monuments, Sagalassos Nymphaeum), and historical and aesthetic values (Sagalassos Nymphaeum, professional survey). Hence, indication of the form of the monument and connection of its members are determinative in deciding for anastylosis and against storing original elements in protected locations. Nevertheless, in the Trajaneum and the Lindos Stoa members not re-assembled – because of their poor state of preservation or their re-assembly necessitating further new material – are stored in areas near the monuments.
Another significant factor justifying the choice of anastylosis concerns its contribution to understanding the archaeology, architecture, and construction of the building in question. That becomes apparent in the Trajaneum and the Sagalassos Nymphaeum and is strongly emphasised by professionals in the survey. Experts also underline the important role played by the retention of monuments as material culture, the values of the surroundings and the setting, and the recovery of the vertical dimension within the site.

As shown above, it is established that anastylosis is defined by the re-assembly of original members on the building, whether these members survive dispersed around the monument or are dismantled and conserved. A great amount of them should be available. Furthermore, re-assembly of elements in their original locations is regarded as determinative of anastylosis (Trajaneum) – this issue is discussed below.

Anastylosis also includes or is employed in combination with other intervention and conservation treatments. For instance, in the monuments of the Athenian Acropolis and in the Lindos Stoa conservation and stabilisation work is undertaken in order to amend the deteriorated state and improve the stability of members previously re-assembled and in order to tackle the effects of atmospheric pollution. Conservation work is also undertaken to avert destructive effects of natural phenomena and visitor wear (Epidauros monuments, Lindos Stoa). However, professionals participating in the survey consent that surface conservation and protection against weathering and pollution are reconstruction features. We should be aware, however, that reconstruction uses mainly new material, therefore, there is no need to conserve and protect it against weathering and pollution, at least not in the first stages after reconstruction. In addition, in monuments subjected to anastylosis planned maintenance works involve conservation of surfaces and elements, so as to guarantee their stability and durability in the long term. Hence, anastylosis entails active conservation before and after the actual intervention.

Besides, anastylosis is chosen to protect structural and architectural members against current and future deterioration (Epidauros monuments, Lindos Stoa), as they will be protecting each other with their weight. Transfer of original members to a museum
and their replacement by copies may also be undertaken and is defined as passive conservation (see Dogani et al. 1994, 49-58).

There are cases, such as the Avaton and the Lindos Stoa, in which anastylosis comprises restoration of certain parts. In the Propylon, the interchangeable use of the terms restoration and anastylosis led me to conclude that these two interventions are not clearly differentiated. The argument of the restorers of the Sagalassos Nymphaeum reinforces the above remark. According to them, anastylosis is not distanced from other types of intervention to monuments. Conversely, it is considered similar to restoration. Likewise, in line with the results of the professional survey, anastylosis means re-assembly and it is included as such among restoration interventions. The individual needs of the monument, i.e. its state of preservation, define the way in which the intervention is implemented. The factor that differentiates the two methods (see Sagalassos Nymphaeum), and with which I agree, is the type of monument – a stone structure, either totally or partially dismembered.

In addition, approximate restoration of the form of the monument with anastylosis is highlighted in almost all case studies. In the professional survey, it is suggested that restoration simply means restoration of the form of the monument, an idea that comes across as slightly confusing, because the form of the structure can also be indicated with re-assembly of its members, thus, anastylosis.

Proposals are made for including reconstruction work in anastylosis of particular monuments. In the Avaton, reconstruction of the wooden beams of the ground floor of the upper stoa was suggested. In the Lindos Stoa and in the professional survey, limited use of surviving material is acknowledged as contributing to identifying the intervention as a reconstruction approach. These suggestions ascertain the differentiation between anastylosis and reconstruction, since the latter is employed without original material having survived and it almost equals rebuilding (see Celsus Library). The Trajaneum restorer offers one more differentiating factor, the engineering approach to the monument – if extensive then we are implementing reconstruction, if less interventive then it is anastylosis.
However, from the professional survey it seems that anastylosis is considered as either restoration or reconstruction or an amalgamation of both. Differentiation between anastylosis and restoration or anastylosis and reconstruction emerges from insertion of new material as either integrations or connecting material. Additionally, the results of the visitor survey underline that, for the public, anastylosis is not clearly defined or understood. For them, either it covers a variety of interventions or its extent differentiates it as repair, restoration, or rebuilding.

Nevertheless, anastylosis is indeed considered a minor intervention with diverse aspects. When employed in previously restored monuments (Lindos Stoa), interventions do not essentially extend to the entire structure, but only where the most serious problems are presented. Besides, comparisons of anastylosis and reconstruction (Lindos Stoa, Celsus Library, Trajaneum) show a preference to anastylosis, rationalised as a preference towards less interventive approaches.

Aspects of anastylosis also include non-intervention, such as the storage of surviving material not re-integrated into the monument. This is the case in the Lindos Stoa, the Pergamon Trajaneum, and the Sagalassos Nymphaeum, due to difficulties in identifying surviving members or due to their bad state of preservation.

Anastylosis is considered by many, especially the restorer of Trajaneum, to be directly related to archaeology, architecture, structural engineering, and conservation, depending on the problems presented by each monument. It can be concluded that anastylosis forms an architectural conservation method, not necessarily employed in itself but comprising further actions with different objectives and features that can be implemented separately or in combination. Alternatively, the term encompasses every kind of intervention to a classical monument. Interestingly, professionals seem to agree that a definition of anastylosis with regard to restoration and reconstruction does not really matter and that we cannot put definitions in limited classifications.

From exploration of the case studies and the results of the professional survey further details on linking anastylosis with particular types of structures and specific geographical locations emerge. They confirm the ideas presented in the literature review (Chapter 3) that anastylosis applies to monuments originally erected with
regularly cut pieces of stone, connected to each other with little or no mortar or with small metallic joints. Specifically, professionals underline that the structure of monuments and the type of original material, given its availability and good state of preservation, play a central role in deciding and applying anastylosis.

The dry masonry, which is considered to allow for restitution of the original shape (Chapters 3, 6), differentiates those monuments from structures with mortars and cramps. Dry joints and stone members signify that the structure is laid out with individual elements, and this is stressed by the experts too. The dry joints, if not found, can be replaced by new ones, which entails limited introduction of new material. But if mortars and cramps are to be replaced, then the amount of integrated new material is increased. Extensive introduction of new material in anastylosis is only noted when integrating new members, even though they may not have to replace or complete original ones. For structural reasons and if a considerable amount of architectural elements survives, not many new ones need to integrated. Therefore, this factor differentiates anastylosis from reconstruction.

In the Sagalassos Nymphaeum it is stated that the type of monuments is what differentiates anastylosis from restoration. Hence, in order to implement anastylosis the structure has to be totally or partially dismembered. Questions may be raised with regard to the building material. It is accepted that anastylosis can be applied to structures made of stone (Chapter 3). The reason is that stone or any other durable material has better chances of surviving time, thus, much original material will be present around the ruin. Elements may need completions or some new members may have to be produced for structural reasons. Monuments of this type of material follow in most cases the specific architecture and structure with dry joints, minimal connections, and individual members. Therefore, anastylosis means re-assembly of dismembered parts of a monument.

The fact that structures with this architecture and structural system may be found in different geographical locations entails that anastylosis has variable applications throughout the world. This is also confirmed by the professionals participating in the survey, who name diverse places, such as Cambodia. Yet, many monuments of this specific structural type are encountered in the Mediterranean region and are dated to
classical antiquity. These structures present similar issues, as noted through the case studies. There are such monuments in Italy, Jordan, and so on. In this sense, this study on anastylosis relates to the conservation of classical monuments located in Greece and Turkey.

What deserves further discussion is the comparison of the concept and practice of anastylosis as applied to ruined monuments and to previously restored ones. This observation derives mainly from the case studies, specifically the monuments of the Acropolis of Athens and the Stoa of Lindos. In the Erechtheion, the undertaken intervention was described as restoration of a restoration, articulating the difference between a ruined monument and a monument previously restored.

In the case studies I distinguished variations and similarities regarding this issue. Similarities are noted in technical and practical matters, such as the research conducted before and during the intervention, the introduction of new material, efforts to find appropriate material for integrations and connections, the joining technique, and so on. It should be borne in mind, though, that occasionally the technical approaches may differ, according to the needs of the monument. Other interventions, such as active conservation and stabilisation of elements, may be included in both cases. The theoretical framework guiding anastylosis in either ruined or restored monuments is the same, even though some flexibility becomes necessary in order to care for their particularities. All case studies and the professional survey underline that each monument has different needs and may require variable approaches. Similarities are also found in the aims sought to be achieved through anastylosis, even though delicate differences emerge. For instance, the structural stability of a ruined monument will either be reinstated or improved through anastylosis, whilst it will simply have to be improved in a previously restored monument. Legibility and values are radically enhanced if a ruined monument is subjected to anastylosis in contrast with a previously restored monument, where they are merely improved.

The major observed difference becomes the fact that a ruined monument may survive with some members on the structure and some dispersed around the monument, whilst a previously restored monument needs to be dismantled so as to be re-
assembled again. The majority of original material is already integrated in the structure and further material may be recovered from additional excavations and research. In this respect, the action of dismantling raises the degree of intervention. However, in some examples (Erechtheion, Lindos Stoa), no action is taken if dismantling is not judged crucial.

Furthermore, what is actively sought in anastylosis of previously restored monuments is minimum alteration of the appearance of the monument (see monuments of the Athenian Acropolis), as it has been established in the consciousness of people since the last intervention project. Although, this is not entirely possible, a certain compromise should be reached.

What is also worth exploring about the concept and practice of anastylosis is the relation between theory and practice. In the case studies, I clearly concluded in the strong link between the theoretical and technical aspects of anastylosis. That was particularly noted in the Erechtheion, while in the Lindos Stoa the theoretical framework being adapted to confront technical problems reinforced that conclusion. Professionals in the survey also consent that anastylosis is and should be subjected to a theoretical approach to restoration principles and that its planning and implementation are related to application of principles and the method itself (as re-assembly of dispersed members). Thus, it forms a technical solution that consists of a theoretical framework. Yet, doubts are raised in this regard. According to one of the Parthenon restorers, we need to free ourselves from theoretical and philosophical speculations in order to tackle technical matters (Korres in CCEM 1987a, 59-60). However, theories have developed and evolved through time, which entails their significance in practices. Furthermore, throughout the case studies the theoretical questioning is never left aside. It is rather used in combination with resolving technical problematic matters or, at least, gives general guidance to the project.

The success of the examined anastylosis projects comes under scrutiny. The advantages of the undertaken anastylosis in the case studies are found in exactly the aims sought to be achieved: improved conservation, recovered structural sufficiency, enriched research on and knowledge of the monument, enhanced legibility and educational potential, and augmentation of values. Nevertheless, in most cases the
disadvantages concern the extent of intervention, which is often increased as a consequence of introducing great amounts of new material, and the effects on authenticity. Other drawbacks are the integration of the restored monument into a ruined site if there are no provisions for the surroundings, as well as the complete reliance on the restored form of the monument to achieve education for the public. This contributes to anastylosis developing into an intervention too ambitious with regard to its educational result, with the subsequent result of extending the degree of intervention to achieve it.

In terms of aesthetics, the final results are difficult to judge. This is also confirmed by the visitor survey, in which no tendency towards what is considered successful or not is observed. This relates more to aesthetic preferences. In a way, anastylosis is successful as it indicates the form and image of a ruined monument or may even correct it, if the monument has been restored in the past. However, in the Parthenon it is pointed out that the implemented works are bound to be more successful because of the experience of the Erechtheion anastylosis. Generally, implementation of the method in many monuments in Greece has resulted in improved approaches.

7.3 Why is it important to define principles and standards of the concept and practice of anastylosis?

Throughout the review of cultural resource management and anastylosis (Chapters 2, 3) the significance of anastylosis as a term, concept, and method is highlighted. The examination of case studies and the results of the professional survey reflect and confirm that.

The historical overview indicates that anastylosis has a long history. It has been endorsed by the *Venice Charter* as a justified form of architectural conservation. Its wide applications on classical monuments of the Mediterranean region, as well as its broader applications throughout the world, and its frequent implementation in accordance to the international conservation and restoration theoretical framework emphasise the validity of anastylosis as a concept and practice. The argument made through the professional survey for a more complex and thorough definition and its confirmation from the analysis of the answers; the effort and time spent on subjecting
monuments to anastylosis; the driving forces influencing its manner and extent; the theoretical questioning; the employed advanced technological methods; and the debates and issues raised reinforce the idea that anastylosis is a viable and significant method for restoring and presenting monuments. Furthermore, its impact on the preservation and interpretation of individual monuments and its proven inclusion as a strategy of site management contribute to concluding that anastylosis is more important than given credit for. Hence, its thorough understanding will qualify it as an approved and successful architectural conservation and interpretation method.

7.4 What are the driving forces that dictate anastylosis implementation and why?

The driving forces that dictate anastylosis implementation, briefly discussed in Chapter 3, are clearly identified through the professional survey and the case studies as interpretation, improvement of legibility and education, as well as tourism and identities. The professional survey underlined that driving forces do not necessarily take priority over each other but may equally influence the decision on and manner of the intervention.

Improvement of legibility, interpretation, and education are interrelated, while experiment and research provide education, mainly to experts but also to the public. As highlighted in the anastylosis of the Celsus Library, anastylosis made the monument better understood by the public, and professionals enriched their knowledge of ancient architecture through the intervention process.

These strongly connected driving forces form crucial factors influencing the decision, implementation, and extent of anastylosis, as it becomes evident in the case studies. This is also admitted by professionals in the survey, with a slight preference towards improvement of legibility and interpretation, rather than education.

Initially, didactic values were considered an anastylosis principle (see Erechtheion), rather than a driving force of the undertaken works. Most anastylosis projects are undertaken to improve the legibility of the structure, and, therefore, its interpretation. The form of the monument is indicated and its three-dimensional existence is
attributed. These annotate the so-called didactic values inherent in a monument that enhance the education of both experts and the public about ancient architecture and archaeology.

In this regard, the concept of didactic anastylosis (Chapter 3) emerged in the Greek context in the 1980's promoting an educational aspect of anastylosis that is considered intrinsic in it. The concept often appears in the Greek case studies, particularly in the Avaton. Education and didactic values address the public and the experts. They are achieved not only as a result of viewing a restored monument but during the process too. As I suggested in Chapter 3 and as it derives from the case studies and the professional survey, educational values are crucial and deserve all due respect when applying anastylosis, yet, they can be achieved through a combination of methods. Anastylosis forms a method fulfilling both preservation and presentation of monuments; in its nature it is not only educational and, thus, it cannot be implemented with one of its aspects taking priority.

On the other hand, in previously restored monuments (Erechtheion, Parthenon, Lindos Stoa) their image is not drastically altered. Simply, their didactic values are improved and maybe rectified – if the past restorations were not entirely correct – rather than radically annotated.

In other cases (Parthenon, Avaton), the educational values of the monument are related to its social role, through a free interpretation of Article 5 of the Venice Charter. This entails that ‘socialisation’ (see Bouras 1983c, 401-405; 1985b, 88-89) of the monument concerns its inclusion in the activities and interests of people. The restored structure appeals more to people, by being better understood and present in their everyday life. It is in this way that the public is considered to be benefited.

The subsequent issue regards the effect on the extent of intervention. Educational values are projected to justify quite extensive interventions, because education and understanding are not considered easily achieved through limited interventions. This is openly admitted by professionals in the survey. Throughout the case studies the visitors’ apprehension of the ruined monument becomes central in anastylosis decisions. Interestingly, in the visitor survey the public demonstrates awareness of
the importance of anastylosis for their understanding and education in terms of history, archaeology, and ancient architecture. However, a tendency to underestimate the public is noted in most case studies. So, extensive interventions become the solution, even though the current theoretical framework is centred on minimum interventions and respect for authenticity. This is indicative in the Greek case studies in which the extent of intervention seems to go beyond the expected limit. The only case where simply motivation of the imagination of the people is sought is the anastylosis of the Pergamon Trajaneum. A modest approach is adopted by its restorer, who admits that they do not have all the answers but can encourage acquisition of knowledge and understanding of the monument.

Given the above speculation, questions emerge with regard to how education can be achieved without affecting the extent of anastylosis. Various means, such as models, drawings, videos, diagrams, signs within the site, and so on, even experimental archaeology, derive as ideas from the case studies and the suggestions by professionals. Their disadvantages centre on the lack of experiencing the volume and details of ancient architecture. Yet, finding an acceptable compromise between intervening in a monument and accompanying anastylosis with explanatory and interpretative material is feasible.

An interesting idea for achieving education and interpretation for the public becomes the use of multimedia and virtual representations. Such an example is provided by the 3D MURALE project, which aims at virtual anastylosis in order to improve the legibility and enhance the interpretation of the ruined monuments of Sagalassos. It is acknowledged as a significant tool for archaeological interpretation. As expected, its use as a means of advanced technology depends on the available financial resources. On the other hand, questions similar to those raised during the course of anastylosis emerge (such as the degree of differentiation between new and original members, the possibility of existing alternative interpretations, and so on). We should acknowledge, though, that such solutions affect neither the material nor the form of the monument, nor do they raise questions on the extent of the intervention.

The necessity of explanatory material is reinforced by the argument that other aspects of the life and existence of the monument possibly will not be understood. In
the Celsus Library, despite attention paid to the extent of the intervention and the care given to applying anastylosis, it may not be entirely clear to everybody how the monument functioned. Its form and image, not its function — a heroon-nympheum and a library, became clearer. On the other hand, the Sagalassos Nymphaeum re-acquired its original function. This was decided and achieved due to the amount of surviving material that was re-assembled and the research conducted in order to re-establish its function. However, a monument can never be entirely contextualised, as it was built in a different era and with different socio-cultural and political expressions. The public and the experts are benefited from variable aspects of the process and success of anastylosis. Learning and understanding should never stop though. This is why anything that can contribute to increasing interpretation, education, and research should be welcomed, or at least seriously considered.

Tourism becomes an important aspect of anastylosis decision-making, being closely related to issues of interpretation and education, as well as financial development. On the one hand, improved legibility and enhanced education will make the monument more easily understood to the general public and the visitors to the site, thus, tourism will develop. Increased tourism conveys money to the site and, hence, possibilities for caring for the monument and the site are created, while the local area and its population benefit from the generation of income. Since most Mediterranean countries rely on tourism for revenue, tourism development should not be neglected. At the same time, tourism has also negative implications related to the wear caused to the heritage resource if it is uncontrolled. This is why tourism development may be looked upon with a certain dismissal and considered as a driving force that negatively influences anastylosis and heritage management decisions. However, in Ephesus, tourism is quite obviously a driving force for implementing anastylosis to the Celsus Library and initiating restoration of other monuments of the site. The same is valid for Trajaneum whose restorer admits that anastylosis was, among others, a gesture of economic help towards the country. Additionally, in Sagalassos, anastylosis was a prerequisite to get permission by the Turkish authorities for excavation and research.

Yet, according to the professional survey and the Propylon anastylosis, financial reasons connected to tourism development influence those who provide the funding
and the resources to undertake the works. Restorers and managers only admit they were influenced by tourism in decisions when the income from tourism is not directly related to them and they do have any financial gain. In Turkey, tourism revenue concerns the authorities while the archaeological expeditions do not have any involvement with it. In contrast, in Greece those responsible for anastylosis are employed by the relevant authorities and are natives of the country. Hence, acknowledgment of being influenced by tourism, as translated into economic benefits, is absent for understandable reasons. Interestingly, the public does not seem judgemental of the financial benefits from anastylosis, they would be rather content with increased tourist numbers, although they would not implement anastylosis for increasing visitation. These ideas balance negative connotations that tourism has acquired regarding its impact on the sustainability of a site.

Given that tourism is related to advanced interpretation of the monument and education for the general public, its sheer development can only be beneficial and entail that safeguarding and appreciation of archaeological heritage have been achieved. There are examples (see Sagalassos) of tourism increase in relation to developing a conservation program in the archaeological site, without diminishing from professional approaches. Alternatively, the only way to deal with the negative aspects of tourism, since uncontrolled visitation to a site contributes to deterioration of the structure and its fabric (Epidauros monuments, Celsus Library), is to invest in visitor management planning.

The national and cultural identities of people are a determinative force in anastylosis and other restoration and reconstruction examples throughout the world (Chapters 2, 3). Professionals in the survey emphasise that monuments represent the heritage richness of a country.

Regarding previously restored monuments, respect of the past restoration as a historical event is linked to the idea of not altering the image of the monument as established in the memory of people. This was clearly the issue in the monuments of the Athenian Acropolis and the Stoa of Lindos, in which alterations to their image would symbolise alterations in their history and character.
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A considerable aspect is the gravity of national identity, although professionals do not seem to be so much influenced by it. It was more influential in the past – in the 19th century Europe where national states were formulated and in Greece at the end of the 19th and the beginning of the 20th century, when anastylosis of significant monuments was considered to have the potential of strengthening the identity of the Greek nation. Because national identity has often been abused to serve political goals, by restoring phases of particular periods of the life of the monument and the site, it is not always seen in a positive light. Such an example is offered by the anastylosis of the Lindos Stoa by the Italians in the 1930's, whose aim was the appropriation of the past of Rhodes in order to establish them in the area. In this sense, acknowledging the biases governing restoration of the archaeological heritage of a particular nation, when monuments of different periods co-exist in the same site, is absolute in the professional survey. In the examined cases, such comments are made regarding the issue of past anastylosis projects focusing on particular periods of the history of the monument and the site.

Additionally, survey participants verify that different results may be produced when a native restores a monument of their ancestral heritage compared to anastylosis undertaken by a non-native restorer. Such issues did not emerge in the case studies, even though anastylosis of the examined Greek monuments is undertaken by Greek professionals, while anastylosis in the Turkish examples is undertaken by foreigners. Yet, national identity forms a sensitive political issue that is not expected to be openly discussed. It would, therefore, be worth examining whether such differences exist in practice by exploring anastylosis works undertaken in specific regions by natives and non-natives.

Lately, national identity, as shown in the Parthenon anastylosis, is looked upon in the sense of the long history and symbolisms represented by the monument in question and not from a nationalistic viewpoint. Its impact is also reflected on the effort and resources spent on the specific monument because of its symbolisms and in comparison to other monuments in Greece. In this regard, it should be considered, and this is confirmed in the survey, that the Acropolis monuments actually represent the classical heritage as the important heritage of the Greek nation, as well as of the western civilisation. Thus, no direct political issues affect decisions. This, however,
cannot be said for other parts of the world or the Mediterranean. Indicatively in 
Ephesus, anastylosis of the Celsus Library and, thus, reinforcement of the presence 
of the Hellenistic and Roman civilisation in the area promote the monument and the 
site as a symbolic link between Asia and Europe.

Despite the above, the use of the Library of Celsus as a place for social gatherings 
and performance of cultural events indicates that anastylosis may be decided upon 
for the impact it may have for cultural identity and for the socialisation of 
monuments, in a way similar to which promotion of educational values in anastylosis 
of Greek classical monuments aims at their inclusion in society and everyday life.
The public, according to the visitor survey, seems to consider the impact of national 
or cultural identity in a positive light.

7.5 What are the problems and complications associated with the 
application of the method and how do they arise?
In Chapter 3 the terminology and etymology of anastylosis have analytically been 
presented while variations in the use of the term in different contexts have been 
highlighted. The professional survey presents interesting ideas concerning 
terminology. Primarily, experts uphold that in the Greek context anastylosis 
comprises various degrees of intervention rather than merely re-assembly of 
dispersed members of a structure. This is confirmed by the interventions undertaken 
in the Greek case studies. Professionals clarify that differences in the spelling and 
etymology of the term determine its differentiation from restoration. For instance, in 
the Italian and the Turkish context restoration covers all kinds of intervention.

However, as it has already been discussed, the establishment of anastylosis as a term 
and concept is in complete accordance with its international definition. Yet, factors, 
such as the type of structures and original material, as well as the amount of 
integrated new material, differentiate anastylosis from other interventions. These 
factors should be included in its thorough definition.

Theoretical and philosophical aspects are not very different. In my opinion, theory is 
directly related to technical matters while the philosophy of the method can be
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discussed in an abstract manner and by taking into account that subjective observations and judgements should be expected.

The only matter that is equally theoretical and philosophical is authenticity. After the World Heritage Convention (1972) and the Nara Document (1994), the introduced references of authenticity have made the concept less relative and abstract and more applicable in practice. Yet, its discussion in relation to aesthetics and with regard to the creation of artificial and modern ruins is more philosophical.

From the well-known references of authenticity (form and design; materials and substance; use and function; traditions and techniques; location and setting; spirit and feeling) only those that have spiritual and functional connotations (use and function; spirit and feeling) are excluded from relevant discussions in anastylosis. From the case studies and the professional survey it emerges that authenticity is expressed in aspects of the architecture and construction of the monument. Authenticity of form and design can be achieved by finding the original structural positions of members, preserving the historical phases of the monument, and respecting the original structural system and the way and form in which the structure has survived through time. Authenticity of materials and substance is respected by using natural stone, reintegrating all available surviving material, avoiding introduction of great amounts of new material, applying protective and conservative measures to original members, and by showing respect for the original material. Authenticity of traditions and techniques is shown by employing well-trained stonemasons to work on the stone, and by utilising traditional tools. Lastly, authenticity in location and setting is achieved by restoring the monument in situ and preserving the site and the surrounding monuments.

Authenticity is affected by extensive interventions (Parthenon) but carefully planned works can preserve it. In the case studies and the professional survey, noted tendencies focus on respecting the authenticity of the monument and its material rather than its original form (see Chapter 3). The public is also judgemental regarding the impact of anastylosis on the authenticity of a monument. Often, though, it is acknowledged that authenticity is an abstract and relative concept. This
is the reason why it becomes impossible to confirm whether the final result is authentic or whether all facets of authenticity were respected (Erechtheion).

Monuments subjected to anastylosis are preserved in fragmentary ways and these ways are neither authentic nor do they recreate the building, simply because the form, image, and function of the monument are not fully regained but rather indicated (Lindos Stoa, Celsus Library). This is actually the aim of anastylosis, as in many cases its objective becomes the indication that the monument has been re-erected and it has not survived like this (Pergamon Trajaneum). Yet, monuments can be fully restored, but in this sense their material and substance would not be authentic. Hence, by striving for one aspect of authenticity another one may be lost. This is why I agree with the relativity and un-attainability of authenticity, though the concept should be thoroughly contemplated, as professionals suggest. Because ruined monuments are relics of the past and their improved presentation and safeguarding are realised through intervention, anastylosis can never present the monument in an authentic manner. Nonetheless, the ways in which authenticity is expressed provide us with an indispensable view of intervening to a monument with the utmost respect.

Aesthetics are closely related to authenticity and to judging the final result of anastylosis in terms of enhancing the aesthetic values of ruins and creating artificial or modern ruins. Realistically, anastylosis results in ruined monuments neither becoming entirely comprehensible nor remaining romantic ruins. They are simply indicated according to how they may have originally looked (Erechtheion). Yet, I should acknowledge the difficulty of judging the end result from an aesthetics point of view (see Erechtheion and Avaton), even more in cases where anastylosis is employed so as to correct past mistakes (Lindos Stoa). However, it is important to speculate and question the aesthetic result, since such considerations and criticism could improve certain aspects of aesthetics in restored monuments.

An idea of how to view the aesthetic result of anastylosis is given by the restorer of the Lindos Stoa who emphasises the harmonious appearance of the restored monument to the non-specialist public and its representation according to the rules and forms of Hellenistic architecture. This criterion is also reinforced by assessing the anastylosis results in the case studies and by some questions raised by anastylosis
professionals involved in the examined monuments or participating in the survey. Additionally, gravity is placed on the differentiation and harmonious integration of new and original material, a principle strongly advocated in the *Venice Charter*.

Concerning the concept of *artificial or modern ruins*, it is probably wise to admit that the result of anastylosis is judged as such, simply because the created ruin has its own aesthetic qualities that do not necessarily correspond to the aesthetic qualities of the original monument. The examined monuments in which anastylosis is complete may be regarded as artificial ruins, since the ancient structure is not presented as it was found nor as it has survived through time (Celsus Library, Trajaneum). If presentation as found or according to the way in which it survived were selected the restorers would have done absolutely nothing. If the choice was directed towards recreating the form and image of the monument, then we would have to resort to complete reconstructions. Since extensive intervention is not the aim of anastylosis, we conclude that the aesthetic result cannot be harshly judged, anastylosis strives for improved presentation and enhanced values, rather than recreation of monuments.

Related to the above is the concept of *dead and living monuments* (Chapter 2). Although in recent years the concept is excluded from the international restoration debate, some interesting comments can be made. Even though monuments form part of our heritage and, thus, our past, they are still ‘present’ in our present. In this sense, they are *living monuments*. Even so, they can still be perceived and distinguished as either monuments belonging to a past and distant culture or monuments forming living specimens of existing cultures and religions. For the latter, full preservation or reconstruction is needed. For the former, monuments do not need to survive in their original form and achieve their original function to be reminders of the past civilisation or culture they represent. It is in this category that monuments of classical antiquity fall. Thus, the concept could prove useful for restorers in terms of limiting the intervention to the absolute necessary or to proceed with intervention with clear articulation of its objectives and confirm that minimum interventions should be guiding principles in anastylosis. Despite the endorsement of the principle of minimum intervention by the architectural conservation theory, anastylosis may still be extensive.
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The theoretical framework of anastylosis has been discussed above (7.2), when referring to anastylosis applications within the current framework of international restoration theory. Using the *Venice Charter* was explored through the inspection of case studies and the ideas emerging from the professional survey. Some principles of the charter merit further study.

Removal of architectural sculpture or members is a matter emerging in some case studies (Erechtheion, Parthenon), due to the atmospheric pollution damaging elements of artistic and architectural significance. Decisions on their transfer to the site museum are in accordance to Article 8 of the *Venice Charter* and for reasons of respect for the original material. They are undertaken after all other options are explored. Authenticity and aesthetics, as well as educational reasons, play an important role in replacing original members with copies. Additionally, their storage and exhibition into the on-site museum means that they would not be entirely deprived of their original context. The only conclusion is that meticulous consideration and assessment of options, as well as consultation of all stake-holders, including the experts and the public, is essential.

A fundamental issue is the respect for original material as advocated in Article 9 of the charter. In the case studies, it is shown through careful handing of original members and avoiding any new work on them; use of ancient and past – from previous anastylosis – connecting points; preservation of historical phases; long-term research to acquire extensive knowledge of the monument; minimum additions that respect all parts of the structure; respect for the character of the ancient construction; and avoidance of conjecture. However, in previously restored monuments (Erechtheion, Parthenon, Lindos Stoa) it becomes quite difficult not to intervene in original parts either because newly discovered members need to be integrated or due to having to remove the damaging material of past restorations. Consequently, the respect for original material has multiple facets. This is probably where the argument against the generality of the charter’s theoretical framework is based.

Another theoretical matter concerns the respect for the ‘valid contributions of all periods’ to a monument, according to Article 11 of the charter. Diverse expressions of this principle in the case studies highlight the factors that may surface through the
course of anastylosis. In previously restored monuments (Erechtheion, Parthenon), later historical phases and interventions are preserved (particularly those of the last restoration) and materials from the past anastylosis are removed, because they are judged not valuable. However, in monuments restored in the past the 'valid contributions of all periods' may not exist anymore. For instance, in the Parthenon, the remains of a mosque were removed during its first anastylosis, while in the Lindos Stoa, the past anastylosis removed all remains not related to the Hellenistic period. Preservation of the image and the form of the monument, as it has derived from past restorations, is aimed at in both monuments, though some changes are inevitable. Hence, preservation of historical phases is perceived in a multilateral way rather than simply in the existence of the monument in one historic period.

Regrettably, although respect for historical phases is declared in theory it does not always happen in practice. An indicative example is found in the Parthenon, where some Byzantine wall paintings survive but the actions regarding them are not clear. Furthermore, in cases where diverse historical phases exist within the monument (Celsus Library, Sagalassos Nymphaeum), the question involves which phase should be preserved and how such a choice will be made – depending on the survival of original material or the significance of the phase or both (Celsus Library).

Throughout the case studies and from the results of the professional survey the significant role of values in anastylosis becomes obvious. Article 3 of the Venice Charter endorses improvement of artistic and historic values, yet, with time, more types of values have been identified and interventions aspire at their annotation (Chapter 3). Anastylosis in the examined monuments aimed at augmenting artistic, aesthetic, archaeological, architectural, scientific, historical, and educational ones.

In general, I noted that neither much discussion nor a systematic analysis of the values attributed to monuments takes place, though their functional and social values are considered to embrace every other component of the significance of the monument. We should acknowledge that methodical assessment of the broad range values and significance of a monument will aid its understanding, as well as the judgements on the ways in which it can be safeguarded for current and future generations. This forms a central point of the current restoration philosophy.
Professionals emphasise that the aim should be to reach a balance among them. If, in the process of anastylosis, values are destroyed then the intervention is unacceptable. Additionally, monuments form part of a greater context, archaeological sites with many buildings and structures, hence, the values of each monument should be established in relation to the site too.

As indicated above (7.2), additional principles were established in the theoretical planning of anastylosis. Among them, reversibility has been extensively deliberated throughout the Greek case studies and the Nymphaeum at Sagalassos. Authors do not use the term with consistency in the case studies. Its perception somehow differs in Greece where it is a quite general principle, whilst in Turkey it is connected with the architecture of the monument and it is completed by specific attributes (retreatability and compatibility). Yet, reversibility enables future dismantling of the monument and re-assembly with further original material, if discovered. It is secured with minimum interventions on original members and with detailed recording of undertaken actions (Erechtheion, professional survey), as well as by technical experience and the assistance of modern technology (Avaton). Technological advances are closely connected to the definition of reversibility, which, according to the restorers of the Sagalassos Nymphaeum, is complemented by the notion of retreatability of treated surfaces and the compatibility of treatment materials. To achieve these notions, technological advances for employing material compatible to the original and ensuring treatments of damaged material are crucial.

Defining and achieving reversibility is constantly under question, as the notion is considered to have a relative value. The fact that anastylosis can be undertaken in previously restored monuments could entail that all intervention actions to a monument are reversible. For instance, damages occurring to the structural elements of the Acropolis monuments and the Lindos Stoa are in a way reversible, since members are dismantled, conserved, stabilised, and then re-integrated to the building. In this regard, the past damaging anastylosis is reversible, even though some elements cannot be re-integrated due to their bad state of preservation. Hence, ensuring that no damages are inflicted on the fabric and structure of the monument is essential for achieving reversibility.
Accordingly, the suggested concepts of retreatability and compatibility enrich the notion by establishing standards for its attainability. The structure of the monuments subjected to anastylosis is compatible with actions of dismantling and re-assembly. Consequently, reversible treatments are possible. Additionally, experts participating in the survey underline the importance of defining reversibility through various facets, such as reversibility of structure and reversibility of restored blocks. In examining the Erechtheion, I highlighted that the significance of reversibility is found in the theoretical possibility to reverse the action, rather than the practical application of the notion. It would be extremely difficult to undertake anastylosis again if further members are found, unless they are of exceptional value. Thus, establishment of what would justify such an action seems to be necessary for complementing the definition of the notion. Further drawbacks are found in that achievement of reversible interventions may encourage extensive interventions. Thus, reversibility should also be defined in relation to minimum interventions.

Minimum intervention theories are dominant in the international restoration theory (Chapters 2, 3). Exploration of the case studies confirms that the professionals involved in the projects are concerned with the extent of anastylosis. Only in the Sagalassos Nymphaeum minimum intervention is clearly articulated as the guide that led the theoretical approach to the anastylosis. Thus, I came to the conclusion that minimum intervention is frequently regarded as a convention rather than a strict principle, while the aim of restorers becomes the limitation of extensive interventions. This is understandable, as anastylosis forms a method for preservation and presentation of the monument, hence, its inherent educational potential affects decisions on the extent of the undertaken actions. Apparently, in most examined projects, particularly in the Parthenon and the Propylon, improvement of legibility, enhanced interpretation, and, most importantly, increase of the educational values guide the manner and extent of anastylosis.

Other factors influencing the extent of anastylosis are the amount of surviving material (Trajaneum) and its state of preservation (Sagalassos Nymphaeum). This is reasonable due to the intervention requiring re-assembly of original dispersed members. If not enough members survive or if they survive in a state that their reintegration is impossible, then we cannot re-assemble them. From a general
perspective, the extent of anastylosis seems to be affected and defined by both theoretical and technical aspects (see Erechtheion). This approach is illustrated in decisions on extending the re-integration of new elements to parts where not much original material survives, for reasons of interpretation and structural stability.

In some cases, proposals for proceeding with reconstruction were also made. Suggestions for reconstructing the roofs of the monuments were justified by projecting various reasons (better protection in the Erechtheion; protection against weather conditions and enhancement of architectural and aesthetic values in the Parthenon – the only monument in which some original material existed; mainly for educational reasons and less for structural reasons in the Avaton). Essentially, gravity should be placed on finding modest solutions. Those involved should not get carried away by the wide range of reasons to extend the intervention when no original material is available.

In this regard, the amount of surviving material should be the determinative factor in deciding at which point the intervention should stop, together with careful consideration of the effects on authenticity and structural stability, as well as of respect for the original fabric. I certainly agree with the statement by a professional in the survey who centres the whole issue around two questions: the why and the up to what extent. In this regard, the reason (why) should be determined by assessing the values of the monument.

Numerous technical matters are raised during the course of anastylosis. Most of them have been extensively discussed in the case studies. Here, some of them will be further analysed.

A central matter regards the amount of original material that survives and the incorporation of new material. It becomes an issue, as limited introduction of new material is a determinative factor of the method. In most case studies, the amount of surviving material is quite high (Avaton; Celsus Library, Trajaneum, Sagalassos Nymphaeum), in others not that high (Propylon). Many experts, as indicated in the literature review, agree that the majority of original elements should be preserved. Survival of sufficient amounts of original material guarantees their re-assembly to
the monument. Several experts, according to the survey, consent to the above statement, since, as it was said, ‘anastylosis would not make much sense otherwise’.

The issue relates to whether there should be a defined amount of original material or an established amount of acceptable new material. The reason prompting me to enquire after the establishment of such a variable was the fact that in some case studies no information was provided regarding how much original material survived (Avaton, Lindos Stoa, Sagalassos Nymphaeum). In the Celsus Library the references to original material were different (either 75% or 90%), obscuring issues about the extent of anastylosis, as it was unclear what survived and from which part of the structure. Generally, information on the amount of original material and the quantity of integrated new material should be a matter of scholarly study.

Disagreement over the establishment of such a variable emerges because anastylosis experts project that everything depends on the state of preservation of the material, the structural stability of the monument, and the knowledge of its architectural form. These render the establishment of a desired amount of surviving material impossible, yet, a matter of common sense. Each case is different and presents diverse needs. As a consequence, no absolute conclusions can be reached, everything related to anastylosis implementation becomes relevant and, therefore, firm sets of rules cannot apply. However, although practitioners question the advisability and usefulness of the issue, they seem to argue the lack of information in practice, as it happens in the Parthenon and the Propylon.

Additionally, absence of the issue in the conservation charters, especially the *Venice Charter*, may indicate its insignificance, according to a restorer working in the Athenian Acropolis. Nevertheless, as Marconi sustains (1993, 138-150) the charters form the theoretical background and never provided technical details on purpose. Nonetheless, lack of percentages or defined limits in conservation charters, in my opinion, is a disadvantage because it may be projected as justification for the use of excessive amounts of new material to complete the form of the monument and stabilise its structure. Additionally, from my study of the monuments subjected to anastylosis, lack of information on the quantity of surviving material prevented a thorough understanding of the intervention.
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Overall, certain professionals in the survey seem to consent to accepted limits in anastylosis. This is a conclusion I also reached since minimum interventions are the cornerstone of current restoration theories and because authenticity of the form and design of monuments is easily affected. Once again, it becomes apparent that theoretical principles should be followed by practical guidance. Establishing limits, even if flexible, in anastylosis will not allow unrestricted use of new material, even though, as highlighted in the Erechtheion, practitioners should be realistic about the quantity of new material that may be required.

Those who agree with establishing accepted amounts of available material emphasise that dispersed original material should be assessed according to volume, surface, weight, entirety of members, mass (professional survey), sheer amount (Propylon), and location (Lindos Stoa). In a few instances, plenty of material survives from specific parts of a monument, while other elements are missing (Propylon, Trajaneum, Celsus Library). Sometimes, enough material survives in a poor state, complicating decisions on its use (see Dimacopoulos in CCEM 1988a, 18). This is noted in the Parthenon, where the restorer distinguishes between quantity and percentage of original material. From the case studies and the professional survey it is concluded that the state of preservation of original material will determine the quantity of new material to be used. Possibly, a large proportion of original faces or surfaces may be lost or remain unidentified. Deteriorated material may necessitate introduction of more new material than anticipated. This will lead to falsifying the form and integrity of the monument and will affect the structural system, if the connecting points require strengthening. In turn, the extent of intervention will increase. This is why most professionals conclude, and rightly so, that any decision depends on the condition and state of erosion of fragmented members, their amount, structural stability, importance as building elements, on the context, and on the condition of other building elements. For instance, enough original members survive from the Lindos Stoa, but not all of them are re-integrated, because their deterioration requires extensive integrations and completions.

Nevertheless, if an acceptable amount of original material is to be specified, professionals are directed towards 70-80% of surviving elements to justify
anastylosis implementation. Only a few experts in the survey suggest lower amounts and only one case study (Propylon) presents low quantity of surviving material. It is also confirmed that the majority of original material should survive in a good state.

The establishment of a named percentage of original material in anastylosis could require a specific percentage of new material to be integrated in architectural members and fragments. If a 100% of new and original material is used in total, then it results in full reconstitution. If anastylosis is partial, then a 100% of material is not required. If full, then, completion of the original material should not be aimed at, just because most original members are present. Accordingly, when 80% of original members survive in a building, it may be possible to establish that another 5-15% of new material is needed to ensure re-assembly of surviving members. Furthermore, in the Avaton, new integrations seem to be assessed with relation to the total extent and volume of the building, as well as the form of the archaeological site. This idea is quite radical, especially since comparison of integrations to the restored monument and, even worse, to the whole site may signify that extensive amounts of new material will be used. Therefore, the argument made with regard to establishing percentages of original and new material is enforced.

Another technical matter that emerged in the exploration of the case studies concerns the re-assembly of members in their original location or randomly. Ideally, re-assembly in original locations should be followed (see Chapter 3). In most cases (Athenian Acropolis, Epidauros) members are assembled in their original positions, if they can be defined. If they cannot be identified with certainty, random assembly is the next choice. The Celsus Library is the only example where members were re-integrated only in their original locations. This becomes an issue because in the past members were unsystematically assembled, so that most material would be reintegrated with fewer completions (Lindos Stoa), creating problems regarding authenticity. It is important, though, to realise that ideal situations hardly exist and, thus, our objective should be the best possible action with the least possible consequences, realising the necessity of compromise and realism.

As monuments subjected to anastylosis are mainly of stone, the new material for completions is natural or artificial stone. Occasionally, both types are used in the
same monument. Although professionals appear directed towards the use of natural stone, in practice their decisions vary. The choice is difficult, depending on technical matters, such as the needs of the monument, the type of the original stone, and is influenced by theoretical and financial issues. The main concern is about new stone being compatible with the ancient one. Recent tendencies towards traditional materials, as well as unsuccessful laboratory experimentation (Avaton, Sagalassos Nymphaeum) enforce the choice of natural stone. On the other hand, the choice of artificial stone is reinforced by its considered facilitation of differentiation between old and new material (see professional survey).

A degree of differentiation between new and original material and their harmonious co-existence is proposed by the *Venice Charter*. Clear differentiation results to a disturbing image. Harmonious integration falsifies the monument and presents it in a way that disrespects the authenticity of its image and perplexes viewers as to what is real and what is not. Professionals agree with the prerequisite of the charter and certainly follow this principle, as shown in the case studies. However, they consent that everything depends on the needs and particularities of the monument, as well as on the aims of the anastylosis.

Different methods, either suggested by the charters or developed from extensive practical experience, achieve desirable but unobtrusive differentiation. They are applied individually or in combination. The most prevalent ones are the use of different texture or colour, abstraction of details, and use of a different composition material (different kind of natural stone or artificial stone to contrast the natural) (professional survey). Differentiation methods are established by past experiences and recent trends, as well as by specific ideas of the professionals. The latter is obvious in the Trajaneum and the Celsus Library, where the continuity of form of the monument and the original light shade effect were considered. On the other hand, application of a contemporary stamp is advocated in the *Venice Charter* and has been practiced ever since the first anastylosis applications. It is a valid choice for many case studies and seems to aim at assisting future researchers or restorers to distinguish between original material and material of later interventions. It is related to professional approaches, by documenting the intervention on the monument.
In most case studies the contrasts between new and original members are not intense but some problems emerge. Difficulties in the visual integration of new stones with original ones are experienced, because colour or surface contrasts can be too obvious (Erechtheion, Trajaneum). With time, the difference between new and old material becomes obliterated, as new members acquire a patina of age. Differentiation of colour and texture also questions the way in which the contrast can be alleviated in the present. Possibilities of producing artificial patina are discussed in the Acropolis monuments with professionals being divided as to whether they consider its application acceptable or not.

Besides the above considerations, another problem that is also raised regards the ability to detect the added material long after its integration. Colour and texture differences will fade with weathering and the creation of the patina of age. Therefore, the question of new material being slightly, yet harmoniously, differentiated from the original resurfaces. In this regard, two issues should be taken into account. As a survey participant maintains, weathering does take place as a law of nature whilst all materials have a specific life span. This actually entails that such processes can only be delayed and cannot be reversed or averted. Thus, it should be accepted that it will be indeed be difficult to detect the new material years after its integration. Additionally, the degree of weathering will vary in both original and new materials anyway.

On the other hand, some options followed in anastylosis relate to keeping detailed records of the intervention and marking the assembled new members. Regarding the visitors, some suggestions by the survey respondents (professional survey) concern the use of explanatory labels and of modern technology and multimedia, with the aim of offering clear understanding of what material is added and in which locations. Thus, ways of dealing with this issue can be employed in order to provide more viable, rather than just visual, solutions to this matter.

Consequently, the requirement for differentiation between new and original material is twofold. On the one hand, the aim is the distinction between authentic and non-authentic parts in the short and the long term and truth in presentation. On the other hand, harmonious integration does not create intense contrasts and upset the aesthetic
view of the restored monument. This is why options should be assessed and decided upon after careful examination and by considering the possibility of employing more than one method.

The joining of integrated members and the preservation of the original structural system are technical matters that require further attention. The issue is interrelated with the type of structures in which anastylosis can be applied, as well as with the principle developed through the Greek experience of anastylosis and as a result of damaging past approaches. This matter is also given special attention particularly because the Mediterranean region is found in an earthquake zone, thus, engineering solutions care for the structural behaviour of the building during seismic activities.

In this regard, the autonomy of architectural elements and their static function are preserved. By following the structural system, the monument will be self-protected and its static sufficiency will be preserved due to the weight of individual elements. Unsuccessful past examples altered the static system of the structures, integrating strong connections. For instance, the previous anastylosis of the Lindos Stoa changed the ancient construction system, leading to destruction of structural material. Additionally, such a principle contributes to preserving the authenticity of the design of the monument and to respecting the original material by avoiding, as much as possible, the future infliction of damages to it. Acknowledging the values attributed to the structural scheme is a principal point of emphasis by professionals in the survey and the case studies, together with the idea that altering the structural system is quite an interventive approach that results in reconstruction rather than anastylosis.

However, the earliest example offered by the Library of Celsus shows the use of past systems of reinforcing the construction. This is justifiable, because at that time it was difficult to test the future behaviour of materials and the results of the employed methods, while new technologies and materials were considered as an advantage in anastylosis applications. The issue has recently re-emerged. This is why in the Erechtheion and the Parthenon, the ancient and past connecting points are used. In other cases (Avaton, Propylon, Sagalassos Nymphaeum) the connections between new and original members are not extremely powerful because it is preferred that, in
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the case of mechanical forces, the connections, rather than the original members, would break. However, professionals admit that this may be unattainable in practice.

Employed ways of connecting members focus on material similar to the original joints. In most cases white cement and hidden ties made of titanium rods are used (Erechtheion, Parthenon). Many other materials are employed and preferences are equally varied. However, the laboratory-tested efficiency of the connecting material is the principal requirement, as emphasised by professionals in the survey. This indicates the acceptance of technological advances and their contribution to producing compatible integrations that will not have adverse effects on the original material and will achieve the best possible results.

The use of traditional and modern tools and techniques is often encountered in anastylosis projects and the professionals have made interesting remarks in the survey. The main thing to note is the interrelation of the use of traditional tools and techniques with achieving authenticity in workmanship, one of the latest tendencies of the restoration theories and practices. In this regard, I agree with an expert stating that in anastylosis of ancient monuments the intent centres on preserving structures rather than techniques. Authenticity in workmanship is not a priority, yet, it is accepted if it occurs. This is why professionals do not indicate any preference towards ancient or modern tools and techniques and they may use both, as proved in the case studies. Selection of tools and techniques is made according to their availability and feasibility, the advantages found in each case, the aims sought to be achieved, and the specific needs of each case.

Technical studies are directly linked to employing modern or traditional techniques and are an important aspect of anastylosis works, as highlighted in all case studies. Studies and laboratory experiments are undertaken in order to decide upon compatible materials for re-integrations and connections and test their future behaviour. Such technical studies produce results regarding the use of natural or artificial stone, the type and composition of artificial stone, the production of cement mortars for copies of members, the use of titanium as connecting material, and a variety of conservation and stabilisation matters for deteriorated members. Thus, the technical issues raised in anastylosis can be dealt with collaboration of science and
technology. This is in accordance with the *Venice Charter* (Article 10), though the charter underlines the importance of ensuring the compatibility of new material and of employing materials and techniques that do not have adverse effects on the building and its fabric. Previously, the *Athens Charter* approved modern technologies, which eventually led to harmful interventions. This is why caution should be exercised when employing modern technology, which should assess the possibility of using the wrong material. However, the recent technological advances have exactly this advantage; they are competent in testing the efficacy and future behaviour of materials, so that their introduction into the monument will not have severe consequences.

Computer technology has become an example of the technological advances that contribute to planning and implementing anastylosis. It forms a competent way of advancing the practice in an effective manner. There are not many examples of its use in the case studies, yet, when employed it results not only in facilitation of works but also on improved approaches. For instance, in the Lindos Stoa and the Sagalassos Nymphaeum extensive testing of structural members was carried out in order to decide which members and fragments belong together. This aspect of the work is quite strenuous but contributes to making the right decisions and assembling members to their correct locations. Contrastingly, computer programs employed in the Erechtheion and the Parthenon identified correct locations of members and facilitated the entire process.

The emergence of virtual technology, as shown through the 3D MURALE project (Sagalassos Nymphaeum), provides methods with exhaustive potential for the reintegration of members and fragments. The idea focuses on producing virtual structural elements, as accurate representations of surviving ones, and easily testing them in a virtual interface. Thus, virtual representations can simulate and test anastylosis plans. Even though they still form research programs, it is only a matter of time before they become widely available. They could form one direction towards which anastylosis professionals could orientate. They also prove the importance of multidisciplinary approaches that engage information technology and their effectiveness in planning and implementing anastylosis. At the same time, virtual multimedia has excellent applications in matters of interpretation. Given that
anastylosis is partly employed for reasons of interpretation, it would be expected to rely on such technologies to achieve interpretation and, possibly, reduce extensive interventions.

7.6 What are the issues related to decision-making, planning, implementation, and post-implementation of anastylosis?

Anastylosis should be planned and implemented as part of a wider management plan for the site in which the monument is found. It is an intervention strategy which cannot be successful if not undertaken with diverse aspects in mind. However, although in most cases it is quite obvious that such a plan exists and covers these issues, in practice there are no references to it. I did not find any relevant information in my examination and study of the monuments in question. This is interesting because some monuments are found in enormous archaeological sites, some of which are even inscribed in the World Heritage List (Athenian Acropolis, Epidauros). This entails that conservation and management have definitely been decided and outlined according to a plan. Thus, management plans are produced and followed, yet, they are not widely publicised. Accordingly, providing information to those interested and subjecting plans and proposals to constructive criticism by relevant professionals and bodies should be identified as a necessity when caring for and restoring heritage.

Even if the existence of a management plan is accepted, it does not mean that it covers all problematic matters or that is strictly followed. If planned management does not exist as a concept, then its importance becomes clearer with time. An indicative example is presented by the archaeological site of Ephesus about which concerns have been raised about its visitor management in particular. In other cases, such as the Lindos Acropolis in Rhodes or the site of Epidauros, although restoration/anastylosis for other monuments of the site are planned and implemented, there are, so far, no provisions for visitors and for the future maintenance of the monument, and there is no consideration of the future of the archaeological site, such as the final form of the restored monuments and their setting. What is certainly not found anywhere or in any management planning is the assessment of the significance and the values attributed to the individual monument and the site. This becomes exceptionally peculiar, especially in an era in which the international theoretical
framework pays close attention to values for reaching well-informed decisions in conservation and management.

Characteristic in this regard is the matter emerging in some case studies, where members of the monument in question are found in second usage in other structures (see Avaton). The members in second usage are not usually returned to their original location for reasons of respect of the later history of the second monument. Yet, the restored monument should be respected in terms of its surviving material and its authenticity. Consequently, a conflict of values surfaces and the only way to make a decision with the absolute respect to the monument and its fabric would be to assess the values of both monuments, so that an acceptable compromise could be reached.

The management plan, including the anastylosis proposal, occasionally seems to be altered and revised as time goes by, instead of having a definite form. The essence of a plan is to be able to predict and tackle all possible emerging issues in the conservation and management of an archaeological site. Having a concrete form that does not need to be modified is crucial, as changes might occur one after the other and then focus about the right course of action is lost. From another point of view, though, it is also fundamental that a management plan or an anastylosis proposal remains flexible to new discoveries. Thus, it should regularly be subject to reviewing so as to reflect the potential changing needs of the monument and the site or the further development of heritage management and conservation theories.

Concerning anastylosis proposals, indicative examples are presented by the Epidaurus monuments and the Lindos Stoa, where renewed anastylosis proposals were produced after further architectural members belonging to these monuments were discovered. Although the protection of structural elements necessitated conservation and anastylosis, the possibility of excavating further members that could be re-assembled was perhaps not examined. Their recovery from the site occurred accidentally. Yet, if the anastylosis had delayed in order to exhaust such possibilities, some elements would have deteriorated and become inappropriate for re-assembly. The subsequent question involves the establishment of when excavation should stop and conservation and presentation of a monument should initiate. In large sites, there are great possibilities of recovering members belonging to ruined
monuments, even after restoration or anastylosis are complete. Hence, there should be more clearly-phrased planning of alternative solutions if a new discovery would alter the decided and implemented anastylosis.

The choice for anastylosis of a specific monument in a large site comes across during the examination of the case studies. For the Erechtheion the choice was based, apart from its immediate need for intervention, on being a convenient choice to acquire further experience to restore other monuments of the Acropolis. Selection of the Sagalassos Nymphaeum concentrated on the fact that it was identified with certainty. Accordingly, anastylosis should essentially be planned with a general overview of the site and its monuments in mind.

Another issue that should be addressed is the duration of the works. In the Acropolis of Athens and in Epidaurus the anastylosis projects are not completed along the specified deadline. A variety of reasons may be responsible for that and a plan should provide for such instances.

A management plan also provides for organisation of the work-site, arranging it with issues of aesthetics and visitor accessibility in mind and taking into account criteria such as time, space, economy, less obstruction, safety for visitors and personnel. In some cases, it forms parts of the anastylosis study, while guidelines for its organisation are even produced (Parthenon). Such provisions are of great importance, especially when the anastylosis projects last for a long time.

Maintenance works are also an important aspect of management, being also strongly advocated in the Venice Charter (Article 4). Even if anastylosis is successfully completed, caring for the restored monument in the years to come will produce better results in the long-term. Such examples are provided by the Erechtheion and the Sagalassos Nymphaeum, in which future programmes, directed mainly towards conservation of surfaces due to atmospheric pollution and weather conditions, are planned. The aim of planned maintenance becomes the prevention of further deterioration. Remarkably, not many case studies present such examples.
This will lead to conclusions on estimating how much new material will be needed for re-assembling the original, since the condition of building elements may be variable. Decisions on what should be done if the quality of preservation is poor should be made in accordance to considerations about structural and technical issues and related educational ones (7.5).

Decisions will also need to take into account the fact that original material may survive only from specific parts, which, in turn, will require partial anastylosis. What should be avoided is full completion of the form of the monument and assessment of completions with relation to the total extent and volume of the building and the site (7.5).

A significant aspect is the relation of anastylosis with the understanding of the archaeology, architecture, and construction of the monument, as well as with diverse fields (archaeology, architecture, structural engineering and conservation) (7.2).

Anastylosis should be guided by modest approaches and the possibility of finding middle-road solutions.

It should be decided and implemented by: applying theory to practice; understanding the relativity and generality of theoretical concepts; respecting the monument and its significance; understanding the particularities of each case; and exploring and evaluating all options.

Anastylosis interventions should be viewed within the framework of minimum possible violation of rules for best possible results and balance among the greatest benefits and minimum losses. Restorers and heritage professionals should realise that some monuments will never be preserved and presented that well if left un-restored and if their members are simply subjected to conservation and stabilisation treatments.

6. Decisions depending on the combination and compromise of the above.
II. PLANNING OF ANASTYLOSIS

A. Management planning and anastylosis

Subsequent steps to be followed:

1. **Assessment of the values** of the monument and the site.

   The necessity of systematically assessing and analysing the values and significance of the monument and its setting before proceeding with the intervention should become the starting point (I.A, I.B.3).

2. **Identification of stakeholders and the public**; their inclusion in the process of value-assessment and decision-making, through visitor surveys and social studies, and provision of information.

   Public consultation and provision of information is a problematic issue which certainly needs to be resolved. Anastylosis is addressed to the public, as it aims at improving the legibility of the ruined monument. Thus, the public should not be left out when deciding on anastylosis and when evaluating its results, as people may value different things compared to the experts (7.2, 7.6).

   Social and visitor studies are essential for getting reliable data regarding the opinions of visitors and the public. The extent to which this information would be considered in decision-making forms a matter of assessing and compromising the different views of professionals and the public (7.2, 7.6).

3. Planning should take into account the presentation and interpretation of the monument and the site, and provide information on the undertaken works.

   In some case studies complete reliance on the restored form of the monument for achieving education for the public is noted. In other cases, the potential of interpretation of the site in which the monument is found is ignored (7.2).

   Interpretation and education should be achieved, not through extensive interventions, but through a combination of interpretative methods. The public should not be underestimated in terms of their understanding and appreciation of ancient architecture and archaeology. Motivation of their imagination can accomplish the same objectives (7.2).
Explanatory material, selected by educators and interpretation professionals, should be present near the monument and should be employed in direct relation to the extent of the intervention. Lectures, photographic exhibitions, education material, and even digitised information can cover aspects of dissemination of information and of advancing interpretation. Interpretative material can be widely varied, such as models, drawings, videos, diagrams, and signs within the site. Information, including aspects of the history and archaeology of the monument, namely its different phases and function, its existence within the site, and its anastylosis, should be provided. It should not be limited to notice boards with views and plans and printed material. Advanced technology, through multimedia and virtual representations, has excellent results. The use of experimental archaeology, in ways similar to how it is employed in heritage education, could aid understanding by the public and the experts, by introducing them to aspects of ancient architecture and building construction. Explanatory and interpretative material in the site can be employed during and after the works. Collaboration of heritage educators and interpretators is fundamental. Education, in terms of experimentation and research, for professionals should also not be dismissed (7.4, 7.5, 7.6).

4. Actions for monitoring the monument and its future maintenance. Their importance is found in preventing further deterioration of surfaces or material from occurring, especially in areas where atmospheric pollution or weather conditions inflict damages to the fabric (7.6).

5. Circulation of visitors during works should be carefully planned, aiming at minimum disturbance of their experience and safety of visitors and workers. Visitors should be allowed to visit or, even, enter a monument subjected to anastylosis. Issues of future deterioration due to visitor wear may impede such a decision. Thus, it should be planned in such a way that visitors will be allowed to experience the monument by entering its space without causing further deterioration to it (7.2, 7.6).

Tourism and visitor management should also be planned. Other aspects regard the approach to the ancient site; such was the aim at restoring the ancient paths of the Acropolis of Athens. These can all be...
6. **Planning and installation** of the work-site should be subjected to extensive research.

7. In **long-term anastylosis projects**, planning should be designed in numerous stages.

8. **Planning of anastylosis** in monuments found in extensive sites is important.

9. **Safety plans** during works should be decided by experts with relevant experience.

Decisions should be judiciously taken but reviewed during and after the course of the works, according to the needs of the monument and the site (7.2, 7.6).

Organisation of the work-site should care for aesthetics, visitor accessibility, safety of visitors and personnel. It should take into account criteria such as time, space, finances, obstruction, and so on. In some instances specific guidelines have been formulated, making that a provision of particular importance for the conduct of anastylosis works, especially long-term ones (7.2, 7.6).

Planning should not diminish the values of the monument and the site while works are in progress. The variety of issues that may delay the planned works should be addressed so that the project finishes in a reasonable time-frame (7.2, 7.6).

If the site is extended in terms of dimensions, the aim should be the establishment of when the excavation and relevant research stop and when preservation begins. Compromise between conservation and stabilisation of elements and implementation of anastylosis should be reached, in case further members are found. It is essential to define which parts of the site should be excavated, researched, and restored rather than conducting research and anastylosis in randomly chosen areas (7.2, 7.6).
10. Planning and provisions for the setting should be based on respect for the traditional setting and its integrity. Principal matter is the preservation of the traditional setting. A general view of the site is important for establishing which monuments will be restored or subjected to anastylosis, to what extent and with what priority (most significant structures, those from where most original material survives, those which urgently need conservation and anastylosis). Main monuments, secondary edifices, and the way in which the site was approached in antiquity could be restored (7.2, 7.6).

Thus, the site is preserved and presented as a whole and the restored monument does not have a negative impact and does not reduce the importance of other structures. The monument in question should adjust perfectly within the site, while the location and relation of existing monuments are indicated and not altered (7.2, 7.6).

11. Reviewing management plans and anastylosis proposals. Alteration and revision of anastylosis proposals (for instance if further elements of the monument are discovered during the course of works) and management plans are a serious issue. They should remain flexible, but also need to predict possible problematic issues, while including clearly-phrased planning of alternative solutions and actions. They should be subject to regular reviewing so as to reflect potential changing needs expressed by the monument and the site and to convey the development of heritage management and restoration theories (7.6).

B. Theoretical principles of anastylosis

1. Anastylosis should be a matter of conservation and less interventive approaches. It should be well thought-out with regard to its interpretative effects. This issue has been extensively discussed above (I.A, I.B.1, II.A.3).
2. **Minimum intervention should be a fundamental principle.**

What is needed for successful anastylosis practices is that minimum intervention theories are clearly articulated and not consist just a general guiding principle, especially since their generality and relativity in theory do not limit quite extensive interventions in practice. Realism should be exercised, as the objectives which anastylosis aims at and the problems that emerge during the course of works may require further interventive actions. Reconstruction work, occasionally involved in anastylosis, should be avoided (7.5).

3. Principal aim of anastylosis should be its definition: re-assemble of existing parts of the monument.

See anastylosis definition (8.1)

4. Respect should be shown towards the form, morphological identity, and architectural unity of the monument.

5. The effect of completeness should never be achieved.

This stems from the discussion on artificial/modern ruins (7.5)

6. Respect should be shown towards original elements by avoiding intervention on them.

Respect for original material derives from the theoretical framework but, multiple problematic matters surface during the practice. A series of actions should be undertaken, such as the accomplishment of thorough research to acquire extensive knowledge of the monument and avoid conjecture in its restitution; careful handling of original elements and avoidance of any new work on them; introduction of minimum amount of additions that respect all structural parts and are compatible with surviving material; use of ancient or past connecting points and respect for the ancient construction; and preservation of all historical phases of the monument. The issue becomes even more difficult in monuments previously...
7. **Respect towards structural members** should ensure their autonomy and static function and preserve the original structural system.

8. Compromise should be made between structural stability, enhancement of values, and achievement of interpretation and education for the public.

9. The **reversibility of the intervention** should guide the works.

   Prerequisites are:
   - not extensive interventions;
   - good preservation state of members;
   - documentation of interventions;
   - following the ancient structural system;
   - compatible new materials;
   - retreatability of original members.

Restored, in which case gravity should be placed on members most affected (7.5)

The structures on which anastylosis can be applied are characterised by autonomy of building elements, which should be respected and not altered (7.2, 7.5).

This has been extensively discussed above (I.A, I.B.6).

Reversibility is a valid concept in anastylosis, even if somehow relative and, therefore, unattainable to some extent. Being strongly related to the features of the specific ancient architecture with individual structural elements, its value is found in enabling the future dismantling of the monument and its consequent re-assembly with more original material, without damages being inflicted either on the fabric or the structural system (7.5)

It should be complemented by the concepts of retreatability of surfaces and material and of compatibility of materials used for treatments, re-integrations, completions, and connections (7.5).

The concept could be broken down to reversibility of the entire structure and of individual restored blocks. As such, it becomes easier to define the notion and secure reversible actions (7.5).

Detailed recording of the undertaken actions, modern technology, technical experience, and minimum interventions will contribute too. Minimum interventions should be given particular attention, since reversibility may be...
10. The concept of authenticity should remain flexible. It should be respected in terms of:

- original structural system;
- architectural members;
- original material and form;
- integrated new material;
- workmanship and building techniques;
- aesthetics.

Projected to justify extensive interventions (7.5).

Standards – kind of damages occurring to the fabric and structure, and amount and type of further discovered original material – that would justify reversal of the undertaken actions should also be established (7.5).

The starting point should be the understanding that it is an abstract and relative concept, respected by avoiding extensive interventions (7.5).

From its established clusters some are more emphasised in anastylosis than others, i.e. its spiritual and functional connotations. Specifically, for achieving authenticity in form and design, the original positions of structural members should be researched, the historical phases of the monument preserved, the original structural system and the way and form in which the structure has survived over time should be respected. Respect for authenticity of materials and substance should be shown by using compatible new material, mainly natural stone, similar to the original, by re-integrating all available surviving material, by introducing limited new material, by conserving and applying protective measures to original members, and, generally, by every means of respecting the original fabric.

Authenticity of techniques is not intensely followed, though efforts should be made for employing well-trained stonemasons to work on the marble using, if possible, ancient and traditional tools. Authenticity of the location of the monument is underlined and should be respected through various actions to the traditional setting (7.5).

During anastylosis, a clash is noted between authenticity of material and authenticity of form. Thus, the concept should be thoroughly contemplated and the understanding that by striving for one aspect of authenticity another one may be lost should be clearly articulated (7.5).
11. Respect should be shown for all historical phases, including recent ones. Respect for valid contributions of all periods has wider applications in monuments previously subjected to anastylosis, as later interventions are regarded as historical phases too (7.2, 7.5).

The period to be represented should be decided after evaluation of the available information and the surviving material. The principle should be respected in a multilateral way, rather than in perceiving the monument as if it belonged to a specific historical period. Problems may emerge when a decision has to be made about which historic period should be represented. The choice becomes easier if more material from one phase, rather than others, survives. If not, the significance and values of the different phases of the monument should be assessed (7.2, 7.5).

12. Aesthetics should be emphasised and be assessed by all stakeholders. Aesthetics are connected with the conduct of anastylosis and the assessment of its final result, especially with regard to authenticity and to judging the enhancement of the aesthetic values of the monument and the creation of artificial/modem ruins (7.2, 7.5).

This study concludes in the stipulation that the aesthetic results of anastylosis should be questioned, since in this way certain aspects can be improved. On the other hand, it is fundamental to understand that the only way of avoiding the creation of artificial or modern ruins, whose own aesthetic qualities become different than those of the original monument, is to leave the ruin as found. As this contradicts the anastylosis objectives, compromise and realism are essential (7.2, 7.5).

C. The extent of anastylosis

The best decision is to adopt a modest approach. The extent of anastylosis is affected by the educational potential inherent in the intervention itself, the amount of surviving material and its state of preservation, as well as on the needs of the monument for structural stability. Thus, it is determined by both theoretical and technical aspects (7.5).
The extent of anastylosis can be varied in different parts of the monument and it should be established according to:

- aims sought to be achieved;
- values attributed to the monument;
- structural stability of the building;
- availability of original material.

Original material should survive in amounts of at least 70-80% of the entire monument.

New material to be integrated should ensure the structural stability of the monument and its members and should not complete in 100% the original material.

If limits are defined for extensive anastylosis interventions, then they should be clearly articulated as limited possible interventions with the amount of qualitatively well-preserved original material being the determinative factor (7.5).

Education can be achieved by other means too or by combination of anastylosis and interpretative material, while structural stability and re-assembly of surviving material can only be accomplished with anastylosis (7.5).

The majority of the original material should be preserved, its qualitative and quantitative preservation should be assessed, and relevant information should be documented. Frequently, the introduced new material is extensive, resulting in increasing the extent of intervention (7.5).

The defined minimum amount of surviving original material that would justify anastylosis and an accepted percentage of new material, to be introduced either as completions or connecting material, are suggested here, according to the study of the monuments of this thesis and the opinions of anastylosis experts. Any number suggested cannot be strictly followed, because certain monuments present certain needs. Thus, the individuality of each case and the variable needs of each monument should always be taken into consideration and the established amounts should be viewed with certain flexibility (7.5).

Establishment of such a number simply attempts to put limits to the extent of intervention and not to allow unrestricted use of new material. The aim becomes the formation of standards against which anastylosis works can be measured (7.5).
D. Anastylosis interventions should be implemented with collaboration of various disciplines through multidisciplinary and interdisciplinary approaches.

1. **Multidisciplinary approaches**
can be achieved with collaboration of a wide range of disciplines, which should be involved according to the needs of the monument.

2. **Interdisciplinary approaches**
can be achieved by training and understanding of the disciplines involved. Disciplines should link the results of their answers.

3. **Collaborations and discussion**
should be instigated among professionals with diverse expertise.

4. The **anastylosis study** should be available to experts for constructive criticism and exchange of opinions, before any action takes place.

The collaboration of disciplines produces essential and significant results in terms of research undertaken before deciding and during the planning of anastylosis. Before deciding on which disciplines can be involved, the needs of the monument and the site should be assessed. Heritage and site managers who will co-ordinate all variable aspects of the project should be present. Social scientists, education specialists, and other heritage experts should deal with issues regarding public consultation, their involvement in anastylosis decision-making, and their provision of information. (7.2, 7.6).

Regarding the training and education of restorers, courses should be available so that restorers involved in anastylosis are trained on its implementation. Different understandings and interpretations perceived by diverse disciplines creates problems. Therefore, they should be informed of each discipline that collaborates in anastylosis and presented with ways and methods with which this collaboration can be harmonious (7.6).

This is extensively discussed in the Greek case studies with regard to the conduct of international conferences in which professionals from various fields participate and discuss the proposed anastylosis (Chapter 4)

This is extensively discussed in the Greek case studies (Chapter 4) and in the discussion about the availability and accessibility of anastylosis plans and proposals (7.6).
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E. Research before intervention

Thorough research should be undertaken before the planning and implementation of anastylosis. Specifically:

1.1 Archaeological research.

1.2 Architectural and topographical research.

1.3 Structural study of original components.

1.4 Surveys of the ruins, their components, and the setting in which found.

1.5 Building information.

1.6 Planning with graphic restorations.

1.7 Technical studies.

Research undertaken will be archaeological, architectural, and structural engineering. Variable scientific investigations on the building and its fabric depend on its needs. Research on archival information and previous interventions is crucial, especially for monuments excavated and restored in the past (7.2, 7.6).

The significance of technical studies is emphasised, as they facilitate the conduct of works, provide the possibility of conducting laboratory experiments and analyses to decide upon compatible and durable new materials and of deciding upon a variety of conservation and stabilisation treatments for deteriorated elements. However, caution should be exercised when employing modern technology. The risk of using wrong materials should always be considered, even though this is exactly where the advantages of the latest technological advances are found (7.5).

The significance of such research, together with multidisciplinary and interdisciplinary approaches and the instigation of applied research for technologies necessary in anastylosis, is reflected on the acquisition of thorough and exhaustive knowledge of the monument that will contribute to well-informed anastylosis plans (7.6).
F. Recording and documentation

Exhaustive documentation should precede and follow any intervention. Recording of the monument and documentation of the anastylosis should include all stages of the intervention: prior, during, after. It should be as accurate and as detailed as possible, because lack of or incorrect documentation has impeded anastylosis works and further research (7.6).

Recording should be accurate and comprise of:

- information on architectural and structural features and details,
- conservation matters,
- and bibliographical and archival research.

Recording may include photographs and drawings, information on new and original material, archaeological and architectural information, archival research, information on past interventions and alterations and on the planning and implementation of the anastylosis, assessment of the final result with reference to problematic situations (to provide insight on how these emerged and were resolved), articulation of the reasons and aims of anastylosis, equal gravity to theoretical and technical aspects of the works (7.6).

Such documentation should be prepared before initiation of works, so that possible mistakes or misunderstandings in interpretation or in the proposed works can be scrutinised and evaluated by relevant professionals in time. Possible diversions from the initial plan should be noted in the records and publications that follow (7.6).

Documentation and publication of the undertaken research and the implemented project should be widely available to those interested. This action improves dissemination of information, while it subjects plans and proposals to constructive criticism and ensures transparency of the undertaken works. Information can be produced in two different levels: specialised (for professionals) and general (for the public) (7.6).

Existence of such information in publicly available archives is an essential step, while language accessibility, through translations or publications in many languages, would also advance accessibility matters (7.6).
### III. IMPLEMENTATION OF ANASTYLOSIS

**A. Anastylosis in relation to other types of treatments.**

1. Other types of intervention or non-intervention may be employed during the course of anastylosis. A broad range of other types of intervention or non-intervention may be employed. Specifically, some members of particular importance may be removed to the museum; non-valuable material may also be removed and stored; members not re-assembled may be displayed or stored near the monument; and members found in second usage may be removed from that structure to be re-integrated to their original location (7.2, 7.6).

2. Other interventions may include:
   - *Conservation and stabilisation treatments.*

3. **Reconstruction should be avoided.**

**B. Implementation of anastylosis**

1. **Historical phases or important artistic and architectural parts**

   Ideally, all historical phases should be preserved.

   If a selection should be made, then it should be made in accordance to:

   - Respect for valid contributions of all periods is another theoretical principle followed in practice. It has wider applications in monuments previously subjected to anastylosis, as later interventions are regarded historical phases too. In general, the principle should be respected in a multilateral way, rather than in perceiving the monument as if it belonged to a specific historical period (7.5).

   - Problems may emerge when a decision has to be made about which historic period should be represented. The choice becomes easier if more material from one phase, rather than others, survives. If not, the significance of the phase influences the decision. Thus, the
2. Original stones

Actions to be undertaken are:

- laboratory tests and experiments;
- exploration of deterioration of badly preserved members;
- subsequent conservation or stabilisation.

3. Use of eroded fragments and weathered members

Assessment of their qualitative and quantitative state of preservation should be undertaken.

Sometimes, decisions are taken to remove members of the monument to the museum for reasons of protection. This decision should be taken after all options are explored (for example, if atmospheric pollution is damaging the material there may not be significant improvements, despite measures being taken). The additional argument would be the respect for and safeguarding of the original material. The members should be removed somewhere close to the monument, so that they will not be entirely deprived of their original context. The next step would be the decision about whether they should be replaced by copies. If they are indeed replaced, then issues of authenticity, aesthetics, and education should be contemplated. Consultation of experts and the public would provide ideas and result in well-informed decisions (7.5).

This issue has been extensively discussed in the case studies (chapters 4 and 5), as well as in chapter 7 (7.2, 7.5).

If parts are removed, this should occur with exhaustive documentation.

way in which it should be dealt with would be to assess the significance and values of the monument and reach a conclusion (7.5).

The material for additions and completions will be either natural or artificial stone. Decisions should be made with regard to its compatibility, durability and harmonious integration; aesthetics; respect towards original material; trained stonemasons and collaborations with geological/stone centres; and financial aspects.

5. Differentiation and harmonious integration of new and original material

Choices are widely varied:
- application of contemporary stamp or mark;
- use of different texture, colour, material;
- abstraction of details;
- new members placed slightly inwards.

Further options can be explored. Issues to be considered are:
- the respect for the signs of ageing of original members,
- the good quality of workmanship,
- the continuity of the form of the monument, and
- the type of new material forms a difficult choice, depending on technical matters and influenced by theoretical issues and financial resources (7.5).

Concerning integrations and connecting materials, suggestions are made in Appendix H (III.B.4).

Requirements are extensive laboratory experimentation for ensuring their compatibility with the original material and the testing its future behaviour and durability (7.5).

The Venice Charter has underlined the importance of differentiation and harmonious co-existence of new and original material. In Appendix H (III.B.5), the currently employed methods are outlined.

Most importantly, methods need to be established according to the needs and particularities of the monument in question. They can be applied individually or in combination for attaining distinction of members for the benefit of both the public and the experts, as well as for reaching the best possible results and documenting the intervention itself. The guiding line should be the distinction between original and non-original parts and the truth in the presentation of the monument, together with the avoidance of creating intense contrasts and overthrowing the aesthetic view of the structure (7.5).

Options should be explored and decided
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- the ability to detect original and non-original members in the long term.

6. Structural system

The values of the structural system should be respected, by following the original construction, when possible.

In previously restored monuments, in which the original structural system has changed, efforts should be directed towards reinstating the static system of the building.

Steps to be taken relate to geological, engineering, and structural studies. Problems to consider regard the bad preservation state of structural blocks, partial anastylosis having to follow a different system, and financial problems.

7. Connecting material and joining of elements

To decide on the connecting material, archaeological and metallurgical studies, upon careful examination and even consideration of combining methods. Particular attention should be paid to the colour and surface contrasts between new and original members and the advantages and disadvantages of the creation of artificial patina (7.5).

In addition, gravity should be placed on the long-term differentiation of new and original members. Detailed records of the additions and permanent marking of new members and fragments will ensure their future detection while explanatory labels and, if possible, the use of modern technology and multimedia will offer the desired distinction for the public in the years to come (7.5).

Respect should also be shown on the static function of members and the general structural design, as this forms a prerequisite for respecting the authenticity of form, design, and material (7.2, 7.5).

Matters that need to be attended are the fact that these monuments are normally found in earthquake zones, thus, the connections should not be so powerful, because if mechanical forces occur, the connections, rather than the original members, should break (7.2, 7.5).

Joining material should be similar to the original, in terms of features and attributes, while past connecting points
as well as laboratory tests should be undertaken.

The joining of fragmented material and members should be executed by testing and checking the connections of the structural blocks and the joining points and by introducing minimum possible connection points and joining material.

8. Traditional and new methods and tools

Advanced methods and techniques can be employed for shifting and re-assembling members to ensure their safe handling.

Ancient methods and techniques can be employed for sculpting and elaborating stones or juttings; joining blocks; and protecting stone surfaces. They enhance authenticity of workmanship and result in better integration.

The choice of tools should be made in accordance to the aims of the intervention.

9. Final re-assembly

Efforts should be made to establish the original location of surviving members, while re-assembly of members in non-original locations should be limited.

Employment of traditional or new methods and tools is interrelated with achieving authenticity in workmanship, though it does not necessarily form a priority in anastylosis. Availability and feasibility of employed tools and techniques, advantages found in each case, aims sought to be achieved, and the specific needs of each case should be explored and contemplated (7.5).

The ideal situation would be re-assembly of surviving members in their original locations. Yet, if these are not identified, re-assembly in matching locations could be an option but should be conducted in a careful and systematic manner. It should be done in a way that no intervention is undertaken in original members, no further new material is introduced, and the authenticity of material and form is
10. Anastylosis in previously restored monuments

Important aspects are:

♦ intervention limited to already restored parts;
♦ correction of morphological and structural inaccuracies;
♦ dismantling of restored parts and subsequent conservation;
♦ research to confirm archaeological and architectural features;
♦ research on previous conservation interventions;
♦ care not to alter the already acquired form of the monument.

B. Computer programs and information technology.

Computer programs and information technology can be employed:

♦ to draw restoration studies;
♦ for documentation matters;
♦ for interpretation reasons.

Monuments previously restored present particularities in anastylosis, compared to ruined or newly excavated ones. They require a slightly different or more flexible approach. Issues that should be emphasised are related to the principle of minimum alteration of the appearance of the monument and the respect for the past restoration as a historic event. Their particularities need to be established, so that their anastylosis can be successful with due respect to their individuality and so that the intervention will not be excessive (7.2).

Compromise and balance of all factors influencing the re-assembly should be exercised, together with realism about the limitations of anastylosis of ancient monuments (7.5).
can become the way forward in limiting extensive interventions. Their applications should deal with the distinction of new and original members (as they would be represented in the virtually reconstructed monument) and the possibility of alternative interpretations (7.5).

IV. POST-IMPLEMENTATION ASPECTS

A. Availability of documentation

Publications of the monuments, covering their archaeology, architecture, history, and anastylosis, should be available to the professional community.

Documentation and publication of the undertaken research and the implemented project should be widely available to those interested. This action improves dissemination of information, while it subjects plans and proposals to constructive criticism and ensures transparency of the undertaken works. Information can be produced in two different levels: specialised (for professionals) and general (for the public). Implementation of a specific publication policy could be an efficient method. Existence of such information in publicly available archives is an essential step, while translations or publications in many languages would advance language accessibility (7.6).

B. Assessment of the results of anastylosis

Assessment should be undertaken by professionals and stakeholders and be widely available to those interested.

The success of anastylosis should be measured and evaluated by assessing the accomplishment of the set objectives, aesthetics, the understanding of the monument, the indication or correction of its form and image, the disadvantages of anastylosis, as well as the successful resolution of any problematic matters that may emerge. The advance of anastylosis approaches depends very much on the experience acquired by implementation of such projects and on the exercise of sincere criticism (7.2, 7.6).

Such assessment could be undertaken
by the professionals involved in the anastylosis projects themselves. Additionally, experts who have worked in similar projects could provide valuable insights of their work as well as offer useful suggestions through their own experiences. These are people qualified to assess an anastylosis project and their diverse expertise (archaeologists, architects, engineers, site managers and heritage consultants) could be applied to specific projects. The views and opinions of the public can also be explored and employed for assessing the results of the specific anastylosis work.

On the other hand, if a project is not completed with absolute success or if certain aspects of it are not considered accurate, further action should be planned, if possible, in order to correct them. If not feasible, then certain lessons can be learned through the process. Besides, the identification of mistakes can improve the planning and implementation of future projects in which similar issues may be raised.

C. Future maintenance works

The implementation of maintenance works should begin after assessing the needs of the restored monument and according to the estimated deadline by the professionals. Maintenance works should be planned and initiated after completion of the anastylosis and according to judgements about their necessity (7.2, 7.6).
8.3 Concluding remarks

The practice of anastylosis has evolved due to acquisition of valuable experience through its applications for a long time and even through mistakes that have occurred in the past. The passage of time, the development of heritage management theories and restoration principles, and the advances of modern technology contribute to improved approaches. This is why no guides and methodologies are static and no theoretical frameworks should be followed in a sterile manner. Flexibility of interpreting theoretical principles and adapting technical methods to the individuality of monuments are necessary for efficiently and successfully completing anastylosis. A series of the broad range of issues emerging in anastylosis were highlighted in the discussion and encapsulated in the guidelines. It is my hope that the conclusions of this research will play a role in the future conservation of the built archaeological heritage.
CHAPTER 9: CRITICAL EVALUATION AND CONCLUDING REMARKS

The data collection is critically evaluated, while proposals for further research are made. The significance of this research for anastylosis and the wider field of architectural conservation and heritage management are highlighted.

9.1 Critical evaluation of data collection and proposals for further research

The examination of the context of cultural heritage management provides the background into which the concept and practice of anastylosis is situated. The outline of the issues of anastylosis offers a thorough overview of what are the current debates and the issues raised from the method.

The selected and examined monuments represent architectural and structural types on which anastylosis is confirmed to be applied and are all related given their common cultural context. This is the reason why they form representative examples of the monuments of the Mediterranean region. The rather small number of case studies and the absence of major diversions in the legislative framework permitted thorough examination of the objectives and the theoretical framework of the practice together with the broad range of the technical issues raised in anastylosis.

The professional survey was delineated and conducted in order to extract information through the experience and ideas of anastylosis practitioners and heritage experts. This tool has never been used before in the context of anastylosis and the extracted information aids thorough exploration of the concept and the method.

The professionals who participated in the survey were involved in projects as individuals or as members of restoration or heritage organisations. Such projects took place in Italy, Greece, Cyprus, Turkey, Malta, the Lebanon, Turkey, and Jordan. Professions are as varied as possible. Organisations cover a wide range of
universities, archaeological and restoration services, and heritage organisations. They represent various countries and world regions – Europe, America, and the Near East.

Some unsuccessful attempts to contact organisations and individuals could not have necessarily been foreseen. Therefore, the questionnaire was employed to extract information in a more systematic way. Professionals provided positive responses to the survey and information on case studies, publications, and contacts. Interesting conclusions could be drawn regarding the reluctance to partake in the survey, such as the disagreement with the topic and the doubt of its necessity or the importance of its results. For some professionals, this survey showed a weakness to embrace all disciplines involved. The purposeful generality of the questionnaire and its lack of reference to specific examples were decided in order to instigate responses from further disciplines and experts. Opportunities were also provided for completing the given answers with further comments, covering diverse matters appearing in individual monuments. During the conduct of the survey and the analysis of its results, the social and cultural biases in responses, as well as in non-responses, were taken into consideration, therefore no conclusions could be absolute in this regard.

The visitor survey was conducted in a small scale in order to highlight the public view regarding anastylosis and architectural conservation, as well as to emphasise the importance of providing information to them and involving them in the decision-making process and in assessing the final results of anastylosis. Given the proven interpretative aspects of anastylosis and its contribution to educating the people about archaeological and architectural heritage, it is crucial to place gravity on the opinions and of the public and including their ideas in further research.

It is important to note that the research was limited in its attempt to address all these issues by a single methodological approach to the anastylosis of ancient monuments. It was conducted in a relatively small-scale manner so as to identify these issues, to assist and encourage the practitioners in adopting a meticulous, yet individual interventive approach to the specific monuments.

Further research undertaken could include systematic examination of additional case studies from all Mediterranean countries in order to include further aspects of
anastylosis and, possibly, establish patterns and compare attitudes. A broader study could embrace examples from other parts of the world too. The professional survey can be extended to explore the views of more professionals and organisations. Additional studies can be undertaken, exploring the technical matters of anastylosis. Philosophical and theoretical issues can be further analysed with an extensive analysis of the evolution of restoration theories through time and their influence on anastylosis. Visitor surveys can be broadly undertaken, with numerous participants and exploring in-depth the identified issues.

Nonetheless, the set aims were accomplished. The research approached the topic in a holistic way, including all possible aspects of anastylosis. It was completed in the best possible way, motivating and advancing further exploration of this widely used and historically significant concept and method and situating it within the context of heritage management and conservation.

9.2 Concluding remarks and significance of the research

This research has explained what is the historical background of anastylosis; what the concept and practice of anastylosis currently entail; why it is important to define principles and standards of the concept and practice of anastylosis; what are the driving forces that dictate anastylosis implementation; what are the problems associated with the application of the method and how they arise; and what are the issues related to decision-making, planning, implementation, and post-implementation of anastylosis.

Accordingly, given the type of monuments anastylosis is applied to, the technical issues and the problems arising with the application of the method, as well as the current restoration and management theories, an appropriate anastylosis methodology has been delineated for the first time. It evolves from the contemporary tendencies in heritage management and conservation and defines the concept and practice of anastylosis (8.1).

This methodological approach (8.2) has the form of concise guidelines accompanied by a relevant commentary. The guidelines follow the process of decision-making,
planning, implementation and post-implementation of anastylosis. They cover theoretical and technical aspects, taking into consideration the relativity of notions and how these should be determined and guide anastylosis decisions. They reflect the fact that technological advances and scientific experimentation are constantly evolving, so no absolute suggestions can be made. The process of determining the need for anastylosis is outlined and the principles of anastylosis, in terms of what the aim should be, what should be respected, and what should be avoided, are delineated. The procedure for applying anastylosis is specified according to specific steps: research, recording and documentation, planning, and implementation. The commentary identifies and explicates problematic matters raised from the concept and practice and suggests ways to resolve them. It does not proceed with absolute proposals but rather guides towards the direction which heritage managers and restorers should follow in order to tackle them.

This methodological approach acknowledges the importance of anastylosis as an intervention strategy in the wider field of heritage conservation and management and projects its significance by delineating a theoretical framework with a value-based approach that provides the theoretical justification and extent of anastylosis and that should guide technical decisions and actions. It narrows down types of monuments and technical problems and suggests that decisions should be made on the basis of consideration of a variety of matters and on the individuality of each case. Practitioners are encouraged to adopt a meticulous approach to monuments.

Therefore, with this research, anastylosis becomes a formalised intervention method, being attributed its importance in archaeological conservation and acquiring a lucid definition on what it encompasses and a delineated strategy on how it should be implemented within the overall theoretical and technical framework of the preservation and presentation of our archaeological monuments.
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