<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preface</td>
<td>9</td>
</tr>
<tr>
<td>The Delft School for restoration architects</td>
<td>23</td>
</tr>
<tr>
<td>Prof. dr. ir. F.W. van Voorden</td>
<td></td>
</tr>
<tr>
<td>The present international state of monument preservation teaching and professional education – Hungarian experiences</td>
<td>41</td>
</tr>
<tr>
<td>Prof. dr. M. Zador, D.Sc.</td>
<td></td>
</tr>
<tr>
<td>State of the art of education on restoration in the Netherlands</td>
<td>51</td>
</tr>
<tr>
<td>Assoc. Prof. J. Roos</td>
<td></td>
</tr>
<tr>
<td>The need for typology</td>
<td>65</td>
</tr>
<tr>
<td>Dr. B.J.F. Coenbrander</td>
<td></td>
</tr>
<tr>
<td>Restoration in Scotland: Researched Support by Historic Scotland</td>
<td>85</td>
</tr>
<tr>
<td>I. Maxwell DA(Dun) RIBA FRIAS</td>
<td></td>
</tr>
<tr>
<td>Restoration in Belgium</td>
<td>95</td>
</tr>
<tr>
<td>Prof. ir. arch. A. de Naeyer</td>
<td></td>
</tr>
<tr>
<td>Restoration in the Netherlands</td>
<td>111</td>
</tr>
<tr>
<td>Ir. M. van Roosmaleen</td>
<td></td>
</tr>
<tr>
<td>Tragedy in three acts ... eventually with a ‘happy ending’</td>
<td></td>
</tr>
<tr>
<td>Dr. A.S. Rosa de Carvalho</td>
<td></td>
</tr>
<tr>
<td>Between Restoration and Reconstruction</td>
<td>129</td>
</tr>
<tr>
<td>Prof. dr. L. Schmidt</td>
<td></td>
</tr>
</tbody>
</table>
Preface

The title 'The Future of Restoration' implies that there is a future for restoration. Putting this even more strongly, the future of restoration is becoming increasingly important. Not only are monuments our witnesses to the past, but these witnesses have much to tell about the organisation of life of work in the past, about how structures were built and about the kinds of techniques and materials that were used. Lessons have often been learnt in the hard way because many buildings have been lost owing to a lack of knowledge about the forces and climatic influences to which they were subjected. That so much has survived may amaze us. This is the result of cumulative knowledge, passed on from master to pupil and beyond, and it has led to the beautiful buildings that we can still treasure and enjoy.

Learning from the past is an important aspect of our work. Increasingly we see that research is directed to investigating the original composition of materials. The background target is to find out why materials such as plaster could remain in tact for hundreds of years while today we cannot guarantee that plasters will survive even a few decades. In this specific case, however, new plasters have been developed by reintroducing old techniques. We can indeed learn from the past!

Awareness of the need to protect our international heritage has also increased in recent years. When Egypt built the Aswan dam international help was given, not only to save animal life, but also to preserve an important part of the cultural heritage. When, according a strict implementation of their beliefs, the Taliban in Afghanistan decided to destroy two ancient 53 metre-high statues of Buddha, which were the biggest in the world, even the strong international reaction was unable to prevent their destruction.
Enjoying our heritage is now also important from the point of view of tourism. The protection of monuments often repays the costs, but this may come at the expense of possible damage by the large number of people who want to visit them, thus endangering the monuments themselves. Schloss Schönbrunn, in Vienna, is visited by many tourists and the money gained from the sale of entrance tickets can easily cover the costs of the restoration and maintenance of the complex. However the flow of visitors brings not only money but also moisture into the castle. It is necessary to find solutions that will ensure that the monument will not be endangered by the effects of this moisture.

In the above examples awareness and measures to prevent potential damage are strongly connected. Knowledge has to fill in the gap and this is the crux of the matter. Where can we find the right information or alternatively what kind of research will provide insight into the right decisions for those engaged in restoration. The same goes for the philosophical debate, the results of which have been laid down in various charters over the years. There has been a gradual shift towards options for restoration in which adaptations to permit new functions are no longer a taboo.

‘Quo vadis?’ the subtitle of the international symposium poses a question. The target is to determine the path for developments in the education and in practice. The first step in this direction is to profile the educational institutions and other knowledge centres working in the field of the restoration. The information thus gained will place the various institutions on the map and indicate their specialities. This will assist in the formation of strong alliances in the future. In an integrated Europe, student exchange will be a normal feature of the educational scene and this will contribute to the increasing international importance of the dynamic knowledge centres.

Additionally we need to know how buildings are currently restored in various European countries. This aspect is closely related to recent developments in ways of thinking about restoration and renovation. It will be interesting to see how the philosophical debate that has formed the basis of national and international agreements (charters) is now being translated into practice. This volume covers the first international symposium on ‘The Future of Restoration’ We believe in the continuation of this formulae and are sure that in the second symposium in 2002 a clearer picture about what is happening at knowledge centres will already be emerging. Of course these will be ongoing actions, never final, but their importance will become apparent in the years to come.

Delft, August 2001
Leo G.W. Verhoef
Educational aspects of “The Future of Restoration”
The Delft School for restoration architects

Prof. dr. ir. Frits van Voorden
Delft University of Technology
The Netherlands

Introduction

'Quo Vadis'? Whatever else it may imply, the subtitle of our symposium certainly indicates that we are on the move, and uncertain about our destination.

Who are the actors in our scenario? Are they architects, engineers, art and architectural historians, or are they perhaps policy makers and clients? I will restrict myself to the first three disciplines and oppose architects and engineers to the historians (including archaeologists). In other words: technical sciences will be placed face to face with humanities and history.

'Quo Vadis'? The context of my introduction is present-day design building praxis in the Netherlands. The market is still booming yet more than ever before society wishes to enjoy the presence of historic buildings. Listed buildings are an important factor from the points of view of both 'work' and of 'finance'. However, anyone who looks more deeply into the fate of the cultural inheritance has less reason to rejoice. In recent decades the protection of historic interiors and historic landscapes – to mention only the two extremes, has proved entirely inadequate and scarcely any progress has been made in the area of inter regional and international co-operation.

Are things in education and research any better? We – the teachers and students of this faculty – do not think so. We want to introduce more scholarship into the educational programmes for both technical and cultural subjects. We need more time for independent study at greater depth, and – with regard to our own group – a
well identified course for the students of restoration, leading to an internationally recognised certificate appended to the Masters degree.

As already mentioned, I will restrict myself to some thoughts on the interaction between the architect and the art historian and then, in the second part, I will present a glimpse of an experiment in design study for students – the restoration workshop in Rome.

A vocational dilemma
More than two hundred years of conservation of monuments and historic buildings has taught us how difficult it is to find the right balance between the responsibilities of the art historian and those of the architect. Time and time again one group dominates the other and the necessary teamwork becomes disturbed. When the art-historical values prevail at the expense of the practical, a breach with reality may arise. Historic buildings and monuments then become silent witnesses to a former period, cut off from everyday life. The surprise element of encountering the historic as an unexpected factor in the familiar built environment is then entirely lost.

The consequence of placing too great an emphasis on technical interference is primarily recognisable in periods of strong economic growth. The attention paid to authenticity and to symbolic values is lost; historic buildings and monuments become economic goods in the within the grasp of the fashion of the day.

The restoration of the listed monument the Drakenburg (House of the dragon) in Utrecht during the seventies (thirty years ago) can be considered a specific blend of monopolies of disciplines. When we look only at the building itself (a house originally constructed in the 12th century), we recognise history as the dominant discipline. If we look at the built ensemble, we recognise a series of architectural interventions in the historic fabric of the inner city:
1. The post office building from the thirties.
2. A tall, high rise apartment and office building from the fifties,
3. The reconstruction of te mediaeval monument.

Three examples of present day construction which underline the adaptation of the city in the middle of the 20th century (figure 1, 2).

A very specific example on the urban scale is the reconstruction of the small fortified city of Bourtange along the north-eastern border of the Netherlands. Its military history and the scientific value of the 16th and 17th century fortification design were the arguments to used to justify both the demolition of farm houses and land consolidation designed to reorganise the agrarian landscape and ownership of the properties involved (figure 3, 4).
The building forms part of a homogenous historic urban scene, de plots, cellars and façade structures of which date from the Middle Ages, while the front-facades are from later periods, especially the 18th and 19th centuries.

The restoration/reconstruction of the Drakenburg House was influenced by research into the history of the building (during the dismantling important parts of the medieval house were revealed) and of scientific investigation (typological investigation of mediaeval brick houses in Utrecht. The thesis of C.L. Temminck Groll, 'Middeleeuwse stenen huizen in Utrecht' (Mediaeval stone houses in Utrecht), Den Haag 1963). When the restoration is considered in relation to the surrounding area, it appears to form part of a series of buildings within this part of the city. To the far left is the Main Post Office (1917-'24, architect J. Crouwel jr.); in the background is the high building of the Neudeflat block of flats (1957-'60, architect H.A. Maaskant).

Summarising: viewed from the canal side, the restoration/reconstruction is a violation of the existing historical townscape from the point of view of town planning, it forms a logical part of a series of interventions, the purpose of which was to add new layers of meaning to the existing city.
Figure 3: Bourtange (Province of Groningen). Aerial photo of the former fortified town ca. 1960. (Photo: RDMZ) After the 19th century demolition activities, of the original 16th century fortified town (designed in 1580; constructed in 1593), only the pentagonal central square, and the pattern of building plots remained visible in the present day landscape. For economic reasons (the promotion of tourism) and cultural-historical reasons (this was one of the first fortified Dutch towns designed according to the principles of the renaissance), in the 1970's the decision was taken to reconstruct the fortifications. Before the reconstruction could start a land consolidation process was carried out, which involved the demolition of a large number of farmhouses on the site of the former fortress area.

Figure 4: Bourtange. Picture of the reconstructed fortress after the first phase of the rebuilding (State ca. 1980, source Fortress Museum Bourtange).

The dilemmas of those engaged in preservation and reconstruction are not limited to traditional historic buildings and structures. The dilemma of reconstruction versus preservation also plays a part in plans for the restoration of listed buildings of the 'Nieuwe Bouw' (Modern Movement) such as the residential complex the Kiephoek, in Rotterdam (1925-'30; architect J.J.P. Oud). In the Kiephoek-complex the first restoration (1984-'85) involved the replacement of the existing facade panels by plastic panels in the original colour. About ten years the decision was taken to demolish and rebuild because the renovated dwellings did not meet the requirements for sustainable public housing (figure 5, 6, 7, 8).
Figure 5: Kiefhoek, Rotterdam. Overview of the residential complex. State ca. 1970, before the first renovation. (Photo: Municipality of Rotterdam)

Figure 6: Kiefhoek, Rotterdam. The result of the first renovation, 1985. (Photo: Author) During the renovation the comfort of the residents was improved (indoor amenities and renovation of façades), while the original floor plans were retained.

Figure 7: Kiefhoek, Rotterdam. Start of the execution of the reconstruction plan (ca. 1995; architect Wiete Patijn). The demolition of the entire complex was considered necessary because of the poor state of the foundations (a shortcoming of the original design) and the choice to create family housing (which meant the combination of two units to form one larger dwelling).

Figure 8: Kiefhoek, Rotterdam. The reconstruction of the complex, ca. 1995 (Photo: Author).
Since the first Governmental Report on Architecture (1991), the preservation of historic buildings and sites has been part of the policy designed to improve the quality of architecture and town planning in The Netherlands. The quality assessments for existing buildings and areas are an integral part of the assessments for modern architecture, town planning and landscape architecture. The involvement of the national government with the planning of new and existing buildings, including monuments and listed buildings, stimulated the trend to consider that the preservation of listed buildings, historic sites and ancient monuments is no longer as an isolated subject, separate from modern design practice. Throughout the Netherlands there are examples of projects in which architecture, town planning and the preservation of listed buildings, historic sites and ancient monuments are integrated to form a new concept for the location in question. This involves not only large scale projects, such as the ‘De Kop van Zuid’ in Rotterdam and the Céramique-Project in Maastricht, but also purely architectural projects such as the extension of the Teylers Museum in Haarlem (architect Hubert-Jan Henket), the extension and restoration of the Rembrandt House in Amsterdam (architect Moshe Zwart) and sophisticated newly constructional interventions in historic environments such as the new archaeological museum of Nijmegen on the Kelfkensbosch (architect Ben van Berkel, figure 9). Even in the redesigning of individual premises the effect of the new union between architecture and the preservation of listed buildings, historic sites and ancient monuments can be observed. An obvious example of the latter is the reconstruction of a shop in Maastricht (architect Wiel Arets, figure 10).

In conclusion: I would like to identify three objectives for our profession, three major tasks.
First the social task; to preserve historic buildings and sites as the memory of the past for coming generations and also a vehicle for identification, on the scale of individual buildings, neighbourhoods and regions, even countries.

Secondly the cultural task; to document, protect and preserve and restore the clearly identifiable buildings and sites; to maintain the cultural heritage and to add new items to the list, such as postwar architecture and town planning, and shared or mutual colonial heritage.

Thirdly the economic task; cultural properties need an income, deriving from their function and permanent and proper use. Whether culturally significant properties generate money and income or that cost money depends largely on the period in time and/or the region in which they are located. It is especially in regions and cities that are facing a period of economic growth that we have to control the economic function of historic buildings. Modesty and durability are key factors in this regard, as also are public use and social involvement.

**A dilemma in education**

In the subtle balance between technology and culture and between current events and history, it is not possible to work to a previously determined formula. Each generation must accept the inheritance of the past anew.

In recent decades to a limited extent we have been able to allow our students to become acquainted with the world of the art historian by admitting students from the arts faculties to our restoration module. Now that one-after-another the classical disciplines have started to provide their own courses in the conservation of historic structures, the need to come to Delft for this purpose has greatly decreased. Naturally, we concede to everyone the right to establish their own educational courses, but the loss of combined courses in this complex field generates a very negative side effect.

Now that all Dutch universities are revising their lecture programmes, whether or not compelled to do so by the introduction of the Bachelor-Master system, there is a unique opportunity to set up a general module for the restoration of historic buildings and monuments. Students and lecturers from different schools would be able to participate in this academic module on the conservation of monuments and historic buildings; an academic module for students of architecture and of the history of art. In co-operation with the Director of the Netherlands Department for Conservation, Professor Fons Asselbergs, this plan – that is still in the initiation phase – will be given further shape and content. It will comprise a mix of lectures for all the participants, plus field trips and individual study assignments. Lectures for all the participating universities will be given at a single location – the best lecturer at the front of a big lecture theatre. However, the field
trips will be for groups of 15 students under the guidance of one of the members of the staff of the University or the Netherlands Department for Conservation. The individual work will be supervised by the student's own universities.

**With the eye of the architect**

So much for my reflections on the discord and on the harmony between architects and art historians. The second theme of my lecture concerns our restoration workshop in Rome.

Each year a group of ten students of architecture works on a design and research assignment in Rome, in the vulnerable zone between the functioning and the museological/archaeological city. Thanks to the hospitality of the staff of the 'Nederlands Instituut', for three weeks they can both work and live intensively in the 'city of cities'. The fact that the library is permanently available and the locations are accessible every day makes this a unique experience for these students. We have been able to work there twice, last year and this year, the draft programme for the third year has already been prepared. Up to now, work has been done on the Portico d'Ottavia, the theatre of Marcello, the S. Nicola in Carcere, the Temple of Antoninus and Faustina (S. Lorenzo in Miranda) and the Ludus Magnus. In addition outstanding monuments and restoration works are studied. We look at the buildings, monuments and sites through the eyes of the engineer (figure 11-14).

One of our study locations is the Castle Santa' Angelo. The Castel Sant' Angelo was built 135-39 AD, as a mausoleum for the Emperor Hadrian, on the banks of the Tiber, outside the then built up area. The tumulus, with its square basement, was linked to the city via a bridge. In the still-open landscape of that period lay the ruins of the Circus of Nero, which had fallen into disuse, while on the slopes of the Vatican-hill there was a necropolis containing the grave of St. Peter (figure 15-22).

The most important aids to a clear understanding the most important features of the architectonic compositions are the cella (cells) of the mausoleum – the geometrical centre of all the building phases – and their orientation in relation to the city and the Vatican. The passetto or tunnels leading to the Vatican, must have been intended as an escape route for the Pope and as an internal corridor for the papal guards. However striking adaptations to the citadel and the passetto may indicate a more peaceful use of the location.

At the beginning of the sixteenth century, in a single operation the closed citadel was transformed into a belvedere by the loggia that Pope Julius II (1503-13) asked Donato Bramante (1445 – 1514) to design in front of the citadel, in the axis of the bridge over the Tiber. The frame created by the loggia composes the cityscape into a picture. In the setting of the sequence of corridors and spaces leading from the Vatican, via the passetto to the citadel, the effect of the view is even more stunning:
Figure 11: Rome, sketch of the ground plan of the city around 1800. Within the 3rd century fortifications of the classical city only the north-west is inhabited. (Sketch author)

A. Vatican City
B. Castel Sant'Angelo
C. The Capitol
D. Colosseum

Between C and D the Roman Forum (Forum Romanum).

Figure 12: The Forum Romanum viewed from the Capitoline Hill; left San Lorenzo in Miranda/Temple Antoninus & Faustina (141 AD), in the background is the Colosseum. (Photo: Author, 1998)

Figure 13: Model of the study project for the redesign of the entrance to the Forum Romanum at the San Lorenzo in Miranda/Temple Antoninus & Faustina. (Study Group 2001)

Figure 14: Model of the study project for the restoration of the Porticus di Octavia at the Theatre of Marcellus. (Study Group 2000)
From the top of this viewing point on the roof of the Papal accommodation, there is an entirely uninterrupted view over the city and the surrounding landscape. Within a relatively small angle of sight lie the most important monuments of the city: the Pantheon, the Campidoglio and the San Giovanni in Laterano:

The loggia of Bramante has a further layer of significance. Almost on the axis of the citadel and the loggia, on the slopes of the Montorio, behind Trastevere, lies the place where St. Peter is thought to have been martyred. On this site, in the quadrangle of the Chiesa di San Pietro in Montorio, at the beginning of the sixteenth century the King of Spain commissioned Bramante to build his Tempietto, a full-scale model of the ideal temple:

As a result of this architectonic intervention, three commemoration points, which were already linked to each other from the historical point of view and by topographical features, gained an extraordinary spatial relationship. The grave of St. Peter with Saint Peter's Basilica, the grave of the Emperor Hadrian and the Tempietto on the place where St. Peter was traditionally supposed to have been martyred.

**Figure 15:** Rome, part of the city map showing the position of St. Peter's, the Castel Sant'Angelo, San Pietro in Montorio and the Passetto Vaticano (A). The north-south axis of the Castel Sant'Angelo, with the loggia of Pope Julius II (designed by Bramante) like a window onto the city, frames the plateau of San Pietro in Montorio with the Tempietto of Bramante (B). (Sketch Author)
Figure 16: Rome, south front of the Castel Sant'Angelo seen from the Sant'Angelo bridge, built by Hadrian in 134 AD as a fitting approach to his mausoleum. The three openings of the loggia of Bramante are situated in the upper circular floor or gallery. Photo: Author; 1996)

Figure 17: Rome, view of San Pietro in Montorio from the loggia van Bramante. (Photo: Author; 1999)

Figure 18: Rome, Tempietto of Bramante in San Pietro in Montorio, constructed in 1508 (Source: Michele Furnari, pp. 78, 79). (Photo: Author; 2000)
Figure 19: Rome, Castel Sant’Angelo, sketch of the third storey with the papal apartments. The loggia of Bramante, at the bottom of the sketch, is reached via a series of rooms and passages, running from the top, in the north, to the bottom of the sketch. These are the Hall of the Library, a narrow passage, the Paolina Room and a passage, with steps, passing through the walls with steps. (Sketch: Author)

Figure 20: Rome, Passetto Vaticano, general view with the entrance to the Castle Sant’Angelo from the bastion of St. Mark. (Photo: Author, 2001)

Figure 21: Rome, the covered way in de Passetto Vaticano, the fortified wall between the Vatican and the Castel Sant’Angelo. (Photo: Author, 2001)
Quo vadis

Outside the fortified historic city to the south east, where the Via Appia Antica starts, is the little church of “Domine Quo Vadis?”. The church stands on the spot where, according to tradition, St. Peter, fleeing from Rome to escape martyrdom, saw a vision of Jesus wending his way to the city. In reply to his question, “Domine quo vadis” (“Lord, whither goest thou?”) he was told “I go to be crucified anew”. Thereupon the saint returned to Rome and martyrdom.

Whoever, like Peter, returns to the city from the south, reaches the Forum Romanum via the Coliseum, the Via Sacra and the Arch of Titus. Thanks to two hundred years of conservation in Rome we can still form a picture of the important episodes of its history. The monuments and the archaeological park are silent witnesses. They are records on a scale of 1:1 that can be of service to both the specialist and the tourist.

We are also familiar with the other side of the coin. After two hundred years, what we now find is a romanticised historical scenario. The Forum Romanum is a designed reconstruction; a still life composed of archaeological finds between ca. 1870 and 1940 that was commissioned by scholars and politicians, and now serves the cultural tourist industry.

If one looks more closely, one can also see signs of an earlier phase of activity during which the ruins were still accepted as historic elements of the functional city. These projects were carried out during the period of the French rule at the beginning of the nineteenth century.

Examples of these architectural restorations include the restoration of the Trajan’s Column and part of Trajan’s Forum, the reconstruction of the Piazza del Popolo,
the restoration of the Arch of Titus and also of the Arch of Septimius Severus. Slowly but surely the layer of the early nineteenth century restorations is disappearing from the cityscape in the second plan. Time and again the fabric of the city is destroyed in order to dig more deeply into the mysteries of its history. That this also undermines the force of the landscape plan of ca. 1870 for the archaeological reserves does not penetrate to the minds of the municipal administrators and conservation services.

The core of the conflict between the museological city and the living city is a conflict between the opinions about history and restoration, and thus a conflict between disciplines. Which discipline is responsible for the restoration policy? The person who gives an assignment to an archaeologist gets an entirely different plan from that of the person who takes on an architect. For the prospective architect Rome is an ideal laboratory: a source of information and a hornet’s nest!

The ultimate assignment of the architect is to create a new relationship between the past and the future. Historic structures are vital components of the urban scene because they are tangible fragments from the past and, at the same time, fulfil functions in the modern city. Of course, such structures may also form impediments, as they do when designers are not aware of the significance the buildings or when buildings are too radically restored or are isolated from their urban context. In these cases extra investment in research is required before any work on the actual designs can begin. This touches upon the distinction between an architect pur and a restoration architect.

In practice, the methods and techniques of the Delft architectural courses have proved very fruitful with regard to the discernment of the structural history of complex historic buildings. With the aid of architectonic and urban development analyses – recorded on maps and drawings and in scale models – insight into historical-cultural significance of values is shaped. This is our contribution to a new form of architectural history and more circumspect restoration practice.
The present international state of monument preservation teaching and professional education – Hungarian experiences

Prof. dr. Mihály Zádor
ICOMOS International Training Committee &
Budapest University of Technology and Economics
Hungary

According to the uniform statement of various international organizations (UNESCO, EU – European Union, mainly of course the ICOMOS) about the trend of development of monument preservation in the 21st century, a basic precondition for successful work is the development of teaching and professional training. This can be seen in the general activity of the above-mentioned international organizations and in the text of the Athens-Charter of 1931, Venice-Charter of 1964 and the newest Cracow-Charter of 2000 (Cracow 2000). In addition to theoretical statements, these took practical steps with foundation of institutions that help the professional training (e.g. ICCROM in Rome or training centres founded by the European Council in Venice on the San Servolo Island).

The most important international event in this field was the foundation of the ICOMOS International Training Committee (abbreviated: CIF) more than 15 years ago, under the chairmanship of Professor A. Tomaszewski. The current president, J. Jokilehto, worked for decades in the ICCROM, and I worked as vice-president of the board. An important part of our work was the formulation of the guidelines, called “Guidelines in Education and Training on the Conservation of Monuments, Ensembles and Sites” that was originally planned to be a Charter. This work was approved by the General Assembly of the ICOMOS in Colombo in 1993. Besides summarizing basic principles and requirements, the Guideline gives practical guidance about the organizational forms, personal and material conditions.

While working on the Guidelines, the Board – mainly with the assistance of B. Feilden - summarised the knowledge that should form part of the training material.
for experts in monument preservation, experts being defined as people with certification of their professional training in this field. He summarised the required knowledge under the headings: principles and theoretical and terminological knowledge research, technology, diagnostics and therapy, knowledge concerning the protection of built and natural environments.

According to the program of the CIF Directory Group, elected in 1993 and still operating, my task is to survey the international situation of teaching on monument preservation. I started this activity on the basis of principles that differed from those of my predecessors and the experience gained during the preliminary assessments later resulted in further changes. At the beginning of the survey my approach differed in two major ways from that of my predecessors. The first was the realisation that the way information had previously been collected caused two principal problems:
- The first is the lack of differentiation: ‘monument preservation’ was a subject within a general professional training programme and no specific recognition was given to it in the professional certification.
- The second is the lack of comparability between information collected at different times from different locations. This is because the surveys contained data on different aspects, or because some lecturers presented a general picture about the training in their country on the basis of data of their own views at international conferences.

All things having been considered, the survey was made on the basis of two different questionnaires (I. and II.). The first one tried to assess the situation of the teaching of monument preservation in different countries by surveying it as a subject, and the second one considered it as a professional training (training giving a certificate of the qualification). I reported about the data collected up to 1999 at the conference in Mexico, and this report should also have been published in a printed form, but regrettably that did not happen. For this reason, I am going to report some of the results now and then I shall give a short general evaluation.

The teaching of monument preservation, which is usually one of the subjects in the curriculum of architects, started in general during the 1970’s. Sadly I realised that the archaeologists, art historians, historians and others who would later like to be active in the professional field of monument preservation, had no opportunity to learn about monument preservation either as compulsory subject forming part of their training or in any other way. (A rare exception is found at the Colorado State University (CSU) in the USA, where this is indeed possible, as I found when I took part in the training during my work there.) In this context I deal only with cases where a subject called “Monument preservation” was in the curriculum; it is not acceptable if the history of architecture is regarded as being equivalent to the teaching of monument preservation.
European views concerning education in monument preservation as a subject indicate that is involved as a mandatory subject in ever-more programs of the faculties of architecture of technical universities. In some ancient, famous universities, lectures on this subject are included within the history of architecture, while in some less well known, more recently established universities within the same country it may be a separate, mandatory subject (such as in France).

It is rather curious that even in its name, the instruction in monument preservation points in the direction of studies in the preservation of the built environment. The relation between the subject and the practical problems of building renewal also deserves attention. For instance, in Gent (Belgium), the subject concerned with the fundamentals of monument preservation is a one-year course (30 lessons) in the fourth year, while in the 5th year it is also presented in 30 lessons under the title: Technology of Renovation and Restoration.

Among European countries, Italian, French and German studies are most strongly directed towards monument preservation, but neither Polish, nor Hungarian studies are less important. At a university or high-school levels, the results of the survey are less clear because – in spite of the clear questioning – the answers are not always unambiguous about the existence of a self-contained subject of that name.

A new phenomenon: the start of graduate training at university level.

In North America, instruction in monument preservation is delivered in Master's degree courses, again mainly intended for architects (Graduate Program). Such courses are available at the Virginia Polytechnic Inst., Blacksburg, Tennessee, the University of Maryland, Columbia University (New York), and at several Universities in Washington, D.C. However, according to the American system, students can also obtain knowledge via various methods and on various professional levels in this field. So in some places the cultural value of monuments and the importance of their protection is on a general level and the questions of renovation and maintenance are be discussed within other subjects. The same applies to the technical literature as well, which frequently gives advice on maintenance to the owners of property.

In South America, an outstanding basis for instruction in monument preservation is provided by the University of Buenos Aires. There the subject of monument preservation is already included at under-graduate level, and includes as many as 75 lessons. The method of instruction comprises exercises and designs, as well as in-situ studies of monument restorations. In Australia, monument preservation is usually delivered as a facultative subject; even so it deserves attention, considering the “youth” of the country. It would be interesting to include details of the subject of monument
preservation at secondary school rather than university (college) level, but actually we still know very little about this aspect.

**Training of professionals happens mainly on post-graduate level.**

Post-graduate education offers a better prospect than does monument preservation as an undergraduate subject. In general it can be stated that almost all relevant courses in the world (only five in the '70s, later increasing to over 20 at university level) follow the quoted “Guideline” trend. Educational courses in Budapest, Cracow, Warsaw, Dresden and Prague are rather similar and were launched almost simultaneously, with only a slight time lag. What the subject purports to do is presented by two examples: In Tampere (Finland), the subjects delivered are: research, documentation, historical materials and structures, conservation, design, legislation, officials, the history of monument preservation, yearly actual problems. In the another part of the world: Buenos Aires (Argentina): methodology, registration, documentation, design, analysis of the history and theory of reconstruction, pathology and technology, building diagnostics, conservation, survey (traditional and by photogrammetry), museology, testing and reconstruction of structures. Special seminars are devoted to historical gardens, the re-use of buildings, underwater archaeology, and on economic problems of reconstruction. Subjects involve any building, according to its function and urban or rural character.

Courses usually last two years; the participants number 15 to 20, admission is conditional on the possession of a university diploma (or Master’s degree) and usually there is an entrance examination (or interview) during which the candidates give accounts of their previous activities in this field (e.g. in Buenos Aires). On completion of the course, students obtain a specialist’s diploma. In most of the institutions, there are also students from abroad.

Specialist courses in different countries vary in several ways including: the number and features of the exercises, site and laboratory tasks (e.g. at the Columbia University in New York there are laboratories that are also utilised by the students and the same is true for the ICCROM in Rome) and furthermore, in the content of the work for the diploma.

In the survey of specialist courses it emerged that in some countries the ICOMOS-CIF questionnaires were given only to those in the field of upper specialist education. This attitude will require a breakthrough. However, an essential development feature of the last decades is the launching of international courses for monumental ‘craftsmen’ and ‘artisans’. These are, medium-level restorers and conservators (e.g. those employed at the San Servolo island in Venezia).
In addition, in most of the countries in a variety of different civil institutions (e.g. Historic Scotland) or, at enterprise level, educational institutes have been established, simultaneously offering the courses in ancient skills and in recent technology. Last but not least, it should be mentioned that the ICOMOS-CIF envisages a great many tasks for improving education, in part by organizing conferences. Recently, the Helsinki conference was most successful, and the proceedings of this, entitled ‘Needs and Ethics Training on Monument Conservation 1995 were published. (NB: as to the title, let me remark that the term ‘Conservation’ here and elsewhere is used in the widest sense for monument protection, while in this country (Hungary), it is given just in the opposite meaning.)

Education and training in Hungary

Outlining the instructions on monument preservation and specialist education is not much easier than outlining the international situation. Though, the active contribution of all members of the Educational Committee has been of great help to me.

In our opinion, the problem requires the consideration of a much more extensive area of activity than the international work by the CIF. In fact the Educational Special Commission of the Hungarian National Committee of the ICOMOS has decided that its field of activity – comprising the actual situation survey – affects all five levels of instruction. These comprise the training of skilled workers (involving vocational secondary schools and basic courses for restorers); medium level technicians, high school education; university education and post-graduate education. In conformity with international principles, here the intention is first to acquire information on two areas, followed by an evaluation of these: first, monument preservation as a subject, then specialist education concluded by a certificate of qualification (diploma).

The most dynamic development in recent years is likely to appear in the training of skilled workers. Actually, there are 19 vocational secondary schools offering some form of education in monument preservation, furthermore, some of the courses involve summer professional practice, surveys, and value preservation-type studies concerning one’s community. These activities cannot be detailed here; even a list of them is rather impressive.

Of course, we have to continue the surveillance work. This is a permanent task for the ICOMOS-CIF; not only for the sake of the exchange of information or experience, but primarily in order to write the necessary evaluations and to study the factors that promote the improvement. This is how we can help in forming the common opinion that has to be shared by the professionals of different countries, thus showing the way to spread the correct methods.
I would like to share the following thoughts regarding the lessons arising from our present knowledge and looking towards the 21st century as well as the exemplary trends in improvement.

- We have to examine the teaching and vocational training in all its complexity in a much wider sense, both as the teaching of a subject and as vocational training and, furthermore, as an important element of the connection that has to be formed with the society. To demonstrate this I drew the pyramid that is presented here. Hopefully it shows you, that the special elements are built upon each other; they interact with each other and their magnitude can hopefully be seen as well. In this way the importance of the education of society, in order to further the effect of society’s mental power, which is used (or should be used) to teach monument preservation becomes clear. The current state of the scale of values of the special categories is not demonstrated in the pyramid. Regarding these I remark, that the worst situation is in the categories on the top of the pyramid. In the bottom line the current situation cannot yet be clearly evaluated.

- We have also to make efforts to ensure that the specialist partners of the architects have an opportunity to study monument preservation during their course (for example as in the current, one semester subject in 2 hours a week), at least as a facultative subject. This is important because of the multidisciplinary nature of monument preservation and because, in practice, teamwork is needed. In this way for example the archaeological and art historian students in the fourth year of their studies can already become sure, whether or not they want to work in areas related to architecture after graduation. At least these students should be given the possibility to study monument preservation.

- In the course of the training the above-mentioned multidisciplinary nature of the subject has to be taken into consideration. We have to join the requirements of the cultural policy to the methods of the social sciences that can be adopted and to the teaching of the newest technical and scientific knowledge that serves the real and permanent protection of the monuments. Examination of the content of the teaching material in numerous countries reveals that the architects who play a crucial role in the restoration of monuments (who have very often studied monument preservation for only one semester at the university) lack the knowledge that they need. This is not only because of the nature of the courses they have followed. The archaeologist or object restorer often has very much more knowledge in the field of the use of new scientific techniques than the architect who has technical qualification. The matters of the content the material used in the new theoretical discussions and the charters have to be taken into consideration.

- In the future it is desirable that more regional international professional training centres should be opened on the advanced, medium and basic levels. A basic criterion is the knowledge of the training language (English), so; it this has to be an important goal in every class.
- The problem of how to formulate the elite-training programme has not yet been solved. This should involve the continuous postgraduate training of professionals, who gained postgraduate certificates 15 to 20 years ago and who are now teaching this subject (training of the trainers). It would be proper to establish at least one international training centre, possibly in a town with important monuments (e.g. in Florence, where already a similar initiative has been taken). The support of competent international organisations is also needed.

- Greater moral appreciation of this work would raise the professional level of the training. Currently no accepted international award is given for such an activity. In this field the concerted action of the UNESCO and the ICOMOS is needed.

- Defining the question of professional competence is an important element that should inspire the organisation of the professional training. In most of the countries concerned this question has not yet been solved, so that at present even somebody who has had training in this field has little or no advantage over others when applying for posts related to the preservation or restoration of monuments.

- The ICOMOS-CIF must play a crucial role in teaching monument preservation and in the training of professionals. To reach this goal, it is necessary to be better organised and more active, ensuring that the work done is continuous and that if necessary some new tasks are taken on.

Our subsequent activities, will be concerned with two tasks: firstly, to clarify the uncertainty about the teaching of this discipline within the subject of history of architecture; secondly is to survey problems of content and methodology. Let us have a look toward the future. To acquire workers with the three skills concerned with monuments: monument restoration technicians, skilled monument restorers and skilled workers in monument ornamentation, as published in the National List for Training (OKJ) it is necessary to legalise educational support of initiatives for protecting and preserving.

The courses provided are intended to educate postgraduates who will be concerned with protecting and maintaining monuments and historical values, and the medium-skilled workers assisting them. In each case the training takes three years for middle-grade specialists (other than restorers) who are already familiar with old technologies or with new methods of reconstruction and preservation. Mandatory eligible subjects in the curricula introduced for medium vocational training in 1998 include 35 lessons on the subject of monument preservation, 107 lessons on building diagnostics, in 144 lessons on maintenance, constructional and renewal technologies. The certificate for medium skilled ‘works-of-art’ preservation assistants who are trained in 400 lessons organised by the Hungarian National Museum entitles those to whom it is awarded to perform (under guidance) the fundamental operations for the preservation and restoration of works-of-art. The main goal of the course is to train
craftsmen in the methods of conservation used for works of art. Higher education for restoration specialists is intended to yield a deeper knowledge in the skill, up to the level of “fine master”.

Little can be said about the technicians at the medium level, since at present new ways are still being sought to solve the problem of providing education at this level. (See e.g. the recent conception of the post-secondary education.) In this field the IPOSZ, the chambers and the ÉVOSZ are of outstanding importance with regard to educational courses mentioned above.

Although there is a general development in high-school education, in some places there is actually regression. There is a single high school where monument protection is an independent subject: in Pécs, at the Janus Pannonius University (Speciality of Urbanism). The subject of Monument Preservation is delivered in four semesters, with two lessons a week, concluded by examination, while in the Speciality for Settlement Engineering and Architecture, monument preservation is taught in 2 lessons a week in the sixth semester, under the title of History of Architecture.

The situation is about the same at the István Széchenyi High School in Gyor, where the subject History of Architecture IV/ Monument Preservation is offered in 3 lessons a week in the sixth semester. Hopefully, the peculiar education in monument preservation clearly segregates it from that in history of architecture. At the Technical School “Miklós Ybl”, which is the most traditional, monument preservation is offered within the scope of Settlement Value Preservation, as part of the program of settlement engineering (two lessons a week, 1 practical lesson. The affiliation of this high school in Debrecen actually pertains to the “Kossuth Lajos” University. This offers education in monument preservation, but not according to the wonderful method that has led to the fact that for many years almost all outstanding masters of Hungarian monument preservation regularly gave lessons in Debrecen during every semester.

As to the education at university-level, the subject of Monument Preservation is offered at the Faculty of Architecture (TUB) in two lessons a week for a semester, in two lessons a week for two semesters at the High School for Fine Arts and at the Faculty for Sciences of the Kossuth Lajos University in Debrecen two lessons a week for a semester. At the University of Horticulture, monument preservation is offered within the subject of historical gardens. This has been a mandatory subject since 1972, at the Faculty of Architecture of the TUB. At the other two universities, the relevant education was been started more recently.

In the field of graduate education, the greatest problem seems to be that of the three professions co-operating in monument restoration, only architects are given lessons in Monument Preservation. Students of the other two branches (those of the history
of arts and archaeology) cannot become acquainted with the field in which they intend to specialise after their university studies by following courses for which they can gain credits. The above concerns the occurrence of lectures in monument preservation within programs of various university faculties and specialities. In Hungary there is no separate specialist education on monument preservation at this level.

The Restoration Institute of the University of Fine Arts has offered education similar to specialist education. Here, education is designed to develop the artistic aptitude of a painter or sculptor restoring paintings or sculpture, rather than architectural monuments in particular. In the individual activities or fields of work of individuals this does not specifically concern the restoration of monuments (hence architectural) or of their ornamentation. But those who complete the course undoubtedly possess the aptitude to perform this work, in particular, if they have completed studies in the speciality of monument preservation.

The Hungarian University of Fine Arts, in co-operation with the Hungarian National Museum, offers a correspondence course in object restoring – artist education – in a number of lessons. The course lasts five years. The diploma authorises the performance of an overall range of art object preservation and restoration-conservation activities.

The subject “Restoration” that is to be introduced at the University of Applied Arts may be considered as preparatory studies for the education of restorers. It is concerned with restoration in a broad sense, concerning not only principal and methodological problems of work-of-art preservation, but also historical, ethical and organisational problems.

Post-graduate education is delivered only at the Faculty of Architecture of TUB, but in conformity with the multidisciplinary nature of the trade, with the participation of students of different branches. Compared to the first experimental course that started in 1970, it even has an internationally pioneering character. The course runs continuously for two years, with 22 to 44 students.

Two aspects of this are of interest: for a long time there has been no continuous specialist engineering education elsewhere; when launched, this course was run in conjunction with that at the Eötvös Loránd University, but it has recently it has become independent. In the past 25 years, education has undergone a continuous development, without a major change in the program, since during this time, evaluations in this country and abroad did not suggest any important modification. In conformity with consultations and students’ opinions between 1995 and 1996, it
was decided that the course to be started in February 1998 should undergo changes according to the opinions and proposals. The extent of these changes exceeded that of the earlier minor changes.

As to the future of post-graduate education, it is of outstanding importance that we do not lose our hitherto favourable international esteem, and to remain an organic part of the relevant international discipline. Furthermore, it must to be kept in view that the most positive evaluations indicated the splendid relations between students from different specialities, which persist after graduation. After the incorporation of the new factors that have been mentioned, it will be appropriate to evaluate the actual changes after two years.

However, evaluation of the educational work as a whole is not our task. Just as others than us establish the rate of exchange of the Forint, the “rate of exchange” of institutions and persons in a given field is determined through international pondering.
ANNEX A: Training of Specialists in Monument Preservation*

*Presentation of the different levels of the subject “Monument Preservation” would require a special diagram, indicating the typical institutions at university, high-school, secondary school and vocational training levels, including the typical institutions, university faculties and other establishments that offering the subject “Monument Preservation”.

*The influence of the society – in particular of its mental elite – on the specialists in monument preservation

Educational-training work of specialists in monument preservation for the society

Education of skilled workers, of artisans, of craftsmen

High-school and university education
Education of technicians
(Recently also at post-secondary level)

Post-graduate training

Post-postgraduate training

Training of the trainers
ANNEX B: Guidelines on education and training in the conservation of monuments, ensembles and sites

The General Assembly of the International Council on Monuments and Sites, ICOMOS, meeting in Colombo, Sri Lanka, at its tenth session July 30 to August 7, considering the breadth of the heritage encompassed within the concept of monuments, ensembles, and site;

Considering the great variety of actions and agents required for the conservation of resolutions, and the necessity of a common discipline for their guidance;

Recognising that many different professions need to collaborate within the common discipline for the conservation and that they require proper education and training in order to guarantee good communication and co-ordinated action in conservation;

Noting the Venice Charter and related ICOMOS doctrine, and the need to provide a point of reference for the institutions and bodies involved in developing training programmes, and to assist in defining and building up appropriate standards and criteria suitable to meet the specific cultural and technical requirements in each community or region;

Adopts the following guidelines, and recommends that they be disseminated for the information of appropriate institutions, organisations and authorities.

Aim of the Guidelines
1. The aim of this document is to promote the establishment of standards and guidelines for education and training in the conservation of monuments, groups of buildings (ensembles) and sites defined as cultural heritage by the World Heritage Convention of 1972. They include historic buildings, historic areas and towns, archaeological sites, and the contents thereof, as well as historic and cultural landscapes. Their conservation is now, and will continue to be, a matter of urgency.

Conservation
2. Conservation of cultural heritage is now recognised as resting within the general field of environmental and cultural development. Sustainable management strategies for change, which respect cultural heritage, require the integration of conservation attitudes with contemporary economic and social goals including tourism.
3. The object of conservation is to prolong the life of cultural heritage and, if possible, to clarify the artistic and historical messages therein, without the loss of authenticity and meaning. Conservation is a cultural, artistic, technical and craft activity based on humanistic and scientific studies and systematic research. Conservation must respect the cultural context.

**Educational and Training Programmes and Courts**

4. There is a need to develop a holistic approach to our heritage on the basis of cultural pluralism and diversity that is respected by professionals crafts persons and administrators. Conservation requires the ability to observe, analyse and synthesise. The conservationist should have a sensitive yet pragmatic approach based on cultural consciousness, which should penetrate all practical work, proper education and training sound judgement and a sense of proportion with an understanding of the community's needs. Many professional and craft skills are involved in this interdisciplinary activity.

5. Conservation works should only be entrusted to persons competent in these specialist activities. Metamorphosis and training for conservation should produce from a range of professionals, conservationists who are able to:

- Read a monument, ensemble or site and identify its emotional, cultural and functional significance;
- Understand the history and technology of monuments, ensembles or sites in order to define their identity, plan for their conservation, and interpret the results of this research;
- Understand the setting of a monument, ensemble or site, its contents and surroundings, in relation to other buildings, gardens or landscapes;
- Find and absorb all available sources of information relevant to the monument, ensemble or site being studied;
- Understand and analyse the behaviour of monuments, ensembles and sites as complex systems;
- Diagnose intrinsic and extrinsic causes of decay as a basis for appropriate action;
- Inspect and make reports of monuments, ensembles or sites, that are intelligible to non-specialist readers and that are illustrated by graphic means such as sketches and photographs;
- Know, understand and apply UNESCO conventions and recommendations, and ICOMOS and other recognised Charters, regulations and guidelines
- Make balanced judgements based on shared ethical principles, and accept responsibility for the long-term welfare of cultural heritage;
- Recognise when advice must be sought and define the areas of need of study by different specialists, e.g. wall paintings, sculpture and objects of artistic and historical value, and/or studies of materials and systems;
- Give expert advice on maintenance strategies, management polices and the policy framework for environmental protection and the preservation of monuments and their contents, and sites;
- Document the works that are executed and make the documents accessible.
- Work in multi-disciplinary groups using sound methods;
- Be able to work with the inhabitants, administrator and planners concerned in order to resolve conflicts and to develop conservation strategies appropriate to local needs, abilities and resources.

**Aims if Courses**

6. There is a need to impart knowledge of conservation attitudes and approaches to all those who may have a direct or indirect impact on cultural property.

7. The practice of conservation should also be interdisciplinary. It therefore follows that multidisciplinary professionals, including academics and specialised salespersons, who have already received their normal qualification will need further training in order to become conservationists; this applies equally to those who seek to act competently in historic environment.

8. Conservationists should ensure that all artisans and staff working on a monument, ensemble or site, respect its significance.

9. Training in disaster preparedness and in methods of mitigating damage to cultural property, by strengthening and improving fire prevention and other security measures, should be included in courses.

10. Traditional crafts are a valuable cultural resource. Crafts persons, who already have high-level manual skills, should be further trained for conservation work in courses that include instruction in the history of their craft, historic details and practices, and the theory of conservation and need for documentation. Many historic skills will have to be recorded and revived.

**Organization of Education and Training**

11. Many satisfactory methods of achieving the required education and training are possible. Variations will depend on traditions and legislation, as well as on the administrative and economic content of each cultural region. The active exchange of ideas and opinions on new approaches to education and training between national institutes and at international levels should be encouraged. A collaborative network of individuals and institutions is essential to the success of this exchange.
12. Education and sensitivity to the need for conservation should begin in schools and continue in universities and beyond. These institutions have an important role in raising visual and cultural awareness - improving the ability to read and understand the elements of our cultural heritage - and giving the cultural preparation needed by candidates for specialist education and training. Practical hands-on training in crafts should be encouraged.

13. Courses for continuing professional development can extend the initial education and training of professionals. Long-term, part-time courses are a valuable method for advanced teaching and useful in major population centres. Short courses can broaden attitudes, but cannot teach skills or impart profound understanding of conservation. They can help introduce concepts and techniques of conservation in the management of the built and natural environment and the objects within it.

14. Participants in specialist courses should be of a high calibre, normally having had appropriate education and training and practical working experience. Specialist courses should be multi-disciplinary with core subjects for all participants, and optional subjects to extend capacities and/or to fill the gaps in previous education and training. To complete the education and training of a conservationist a practical internship is recommended.

15. Every country or regional souq should be encouraged to develop at least one comprehensively organised institute giving education and training and specialist courses. It may take decades to establish a fully competent conservation service. Special short-term measures may therefore be required, including the grafting of new initiatives onto existing programmes in order to lead to fully develop new programmes. National, regional and international exchanges of teachers, experts and students should be encouraged. Regular evaluation of conservation training programmes by peers is a necessity.

Resources
16. Resources needed for specialist groups may include e.g.:
   - An adequate number of participants of required level ideally in the range of 15 to 25;
   - A full-time co-ordinator with student administrative supped;
   - Instructors with sound theoretical knowledge and practical experience in conservation and with teaching ability;
   - Fully equipped facilities, including lecture space with audio-visual equipment, video, etc., studios, laboratories, workshops, seminar moms, and staff.
ounces;
- A library and documentation centre providing reference collections, facilities for co-ordinated research, and access to computerised information networks;
- A range of monuments, ensembles and sites within a reasonable radius.

17. Conservation depends upon documentation being adequate for the understanding of monuments, ensembles or sites and their respective settings. Each country should have a research institute and an archive recording its cultural heritage and all related conservation works. The course should work within the archive responsibilities identified at the national level.

18. Special arrangements are needed for the funding for teaching fees and subsistence for mid-career participants as they may already have personal responsibilities.

ANNEX C - 1

<table>
<thead>
<tr>
<th>Mandatory for Course “A”</th>
<th>Fundamentals of Museology and Underlying Sciences</th>
<th>20v</th>
<th>-</th>
<th>-</th>
<th>-</th>
<th>20</th>
<th>20</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sources and Auxiliary Sciences of History</td>
<td>-</td>
<td>20v</td>
<td>10v</td>
<td>-</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>Design of Monumental Reconstruction</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>20a</td>
<td>20</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mandatory for Course “B”</th>
<th>Fundamentals of Construction</th>
<th>20v</th>
<th>20v</th>
<th>10a</th>
<th>-</th>
<th>50</th>
<th>50</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fundamentals of Building Operations</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>20a</td>
<td>20</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Total</th>
<th>Number of examinations:</th>
<th>120</th>
<th>120</th>
<th>120</th>
<th>120</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>„A” : 4</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>„B” : 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

|                         | Number of exercise marks:                    | -   | 1  | -  | -  |     |     |
|                         | „A” : 2                                       | 1   |    |    |    | 3   |     |
|                         | „B” : 1                                       | 1   |    |    |    | 4   |     |

State examination subjects in course “A”:
1. Theory and Practice of Monuments Preservation
2. Building Materials in Historical Ages, and Up-to-Date Conservation Methods
3. History Sources and Auxiliary Sciences

State examination subjects in course “B”:
1. Theory and Practice of Monuments Preservation
2. Building Materials in Historical Ages, and Up-to-Date Conservation Methods
3. Fundamentals of Construction
<table>
<thead>
<tr>
<th>Subjects</th>
<th>Course A</th>
<th>Course B</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. History of Hungarian Architecture</td>
<td>20v 20v 20v 10a</td>
<td>70 70 -</td>
</tr>
<tr>
<td>2. Theory and Practice of Monument Preservation</td>
<td>20v 20v 20v 10a</td>
<td>70 70 -</td>
</tr>
<tr>
<td>2. Building Materials in Historical Ages and Up-to Date</td>
<td>20a &quot;B&quot;g &quot;A&quot;g 10v</td>
<td>60 40 20</td>
</tr>
<tr>
<td>Conservation Methods</td>
<td>20v 10a</td>
<td></td>
</tr>
<tr>
<td>3. Design Methods and Structures in Historical Ages</td>
<td>20Av 20Aa - -</td>
<td>40 40 -</td>
</tr>
<tr>
<td></td>
<td>Ba Bv</td>
<td></td>
</tr>
<tr>
<td>4. History and Preservation of Fine and Applied Arts Creation and</td>
<td>20a 20v 20v -</td>
<td>60 60 -</td>
</tr>
<tr>
<td>Monumental Complexes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Ethnography, Vernacular Monuments</td>
<td>- - 10a 20v</td>
<td>30 30 -</td>
</tr>
<tr>
<td>6. Preservation of Historical Gardens</td>
<td>- - 10a 10v</td>
<td>20 20 -</td>
</tr>
<tr>
<td>7. Aesthetics of Monuments and Surroundings</td>
<td>- - 20v -</td>
<td>20 20 -</td>
</tr>
<tr>
<td>8. Reconstruction of Historical Towns</td>
<td>- - - 20v</td>
<td>20 20 -</td>
</tr>
<tr>
<td>9. Practice and Theoretical Methodology of Monumental exploration</td>
<td>- - - 20v</td>
<td>20 20 -</td>
</tr>
</tbody>
</table>

Requirements at the end of the semester:
v: examination; g: exercise mark; s: signature

Weekly number of lessons (theory + exercises):
1\(^{st}\) year 1\(^{st}\) semester 2\(^{nd}\) year 2\(^{nd}\) semester

Total number of lessons in the subject throughout the courses:

Number of lessons in theory: 
Number of lessons in exercises: 

Technical University Budapest
Faculty of Architecture

Institute of History and Theory of Architecture
ANNEX C - 3

POST GRADUATE COURSE FOR MONUMENT PRESERVATION
PROGRAMME OF THE 1-4. SEMESTERS

<table>
<thead>
<tr>
<th>Course</th>
<th>1.</th>
<th>2.</th>
<th>3.</th>
<th>4.</th>
</tr>
</thead>
<tbody>
<tr>
<td>The history of the Hungarian architecture</td>
<td>10s</td>
<td>10s</td>
<td>10s</td>
<td>10s</td>
</tr>
<tr>
<td>Design methods and building structures of the history</td>
<td>10s</td>
<td>10s</td>
<td>10s</td>
<td>10s</td>
</tr>
<tr>
<td>The architecture of the Hungarian village</td>
<td>20e</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hungarian ethnography</td>
<td>20e</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>History and theory of garden design</td>
<td></td>
<td>10s</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Historical interiors</td>
<td>10s</td>
<td>10e</td>
<td>10s</td>
<td></td>
</tr>
<tr>
<td>History and theory of monument preservation</td>
<td>20e</td>
<td>10s</td>
<td>10e</td>
<td></td>
</tr>
<tr>
<td>Practical monument preservation</td>
<td>20e</td>
<td>20s</td>
<td>20s</td>
<td>20s</td>
</tr>
<tr>
<td>Conservation methods</td>
<td>10e</td>
<td>10e</td>
<td>20e</td>
<td>20e</td>
</tr>
<tr>
<td>Planning of restoration of monuments</td>
<td></td>
<td>10s</td>
<td>20e</td>
<td></td>
</tr>
<tr>
<td>Protection of historical gardens</td>
<td></td>
<td></td>
<td>10e</td>
<td></td>
</tr>
<tr>
<td>The practice of the protection of work of fine and applied arts</td>
<td></td>
<td></td>
<td></td>
<td>10s</td>
</tr>
<tr>
<td>Protection of historic settlements</td>
<td></td>
<td>10s</td>
<td>10e</td>
<td></td>
</tr>
<tr>
<td>Methods of measuring of monuments</td>
<td>10s</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Investigation of monuments</td>
<td></td>
<td>10e</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Museology (for architects)</td>
<td></td>
<td></td>
<td>10s</td>
<td></td>
</tr>
<tr>
<td>Iconography (for architects)</td>
<td></td>
<td></td>
<td></td>
<td>10e</td>
</tr>
<tr>
<td>A sources and auxiliary sciences of history (for architects)</td>
<td>10s</td>
<td>10s</td>
<td>10s</td>
<td>10s</td>
</tr>
<tr>
<td>Aesthetics of architecture (for architects)</td>
<td></td>
<td></td>
<td></td>
<td>10s</td>
</tr>
<tr>
<td>Principles of architecture (for students having MA)</td>
<td>20s</td>
<td>20s</td>
<td>10s</td>
<td>20s</td>
</tr>
<tr>
<td>Total number of the lectures</td>
<td>120</td>
<td>120</td>
<td>120</td>
<td>120</td>
</tr>
<tr>
<td>Requirements</td>
<td>5e+5s</td>
<td>6e+4s</td>
<td>5e+5s</td>
<td>5e+4s</td>
</tr>
</tbody>
</table>

Abbreviations: 's' signature
'c' exam
State of the art of education on restoration in the Netherlands

Assoc.Prof. J. Roos
Delft University of Technology
The Netherlands

Orientation

I am honoured to inform you about the rich field of education in the re-use, renovation and restoration of the architectural heritage in Holland today. On the threshold of starting a new education-program in the autumn of the year 2002, we find it necessary to consider the state of the art of education in relation to our architectural heritage. In collaboration with the Rijksdienst van de Monumentenzorg (Dutch Heritage) and the Hoogeschool van Utrecht, we have started an investigation, which is still in progress, amongst eleven educational institutes providing courses at or close to the level of the university.

The following questions were regarded as essential:
- What is the present situation of education in the Netherlands?
- What is it becoming?
- What should it become?
- What are the present opportunities to start a new curriculum in 2002?

Work on these ideas is still in progress, so today we will focus on the University of Delft. Here education in the field of the architectural heritage started about 30 years ago. Although the programme has to some extent fulfilled its purpose, in the present situation we must conclude that we could perform better in the area of education on the cultural heritage. The shortfall is largely due to the lack of sufficient skilled manpower.
If it is to survive into the next decades the specific field of restoration, both practical and educational needs the impulse of good and skilled manpower. For this reason in future the fragmentation of knowledge within the several institutes should be prevented, or to put it firmly: we could do better by coordinated clustering of knowledge.

An important centre of knowledge in this field, which is already active in education, is Dutch Heritage, in which professors from several educational institutes in the Netherlands are already participating. It would be very interesting to establish a means of collaboration between educational institutes with its focal point in Dutch Heritage. This would involve making an effort to provide education in an efficient way so as to derive the optimum result and the exploitation of existing fields of knowledge.

Inventory of educational institutes in the field of the architectural heritage

Eleven institutes have been asked to answer a series of questions. Their answers should enable us to point them in the direction of the five fields of knowledge as expressed by Dutch Heritage. These are summerized below:

A. Cultural values
   History of heritage
   Theory and ethics of restoration
   Building evaluation (aim protection)
   History of building (documentation)

B. Preservation (techniques and materials)
   Knowledge of materials
   Preservation techniques
   Protection of cultural objects

C. Redesign and renovation
   Methods for evaluation
   Models (procedures) for re-use
   Knowledge of the law relating to historical structures with regard to building-performance improvements and the preservation of heritage values.
   Techniques for redesign

D. Preservation of monuments in towns and in rural landscapes
   Townscape
   Historical geography and landscape (culture and nature)
   Historical infrastructure (Resistance).
E. Contextual Knowledge

Legislation
Subsidy-schemes
The practical application of the principles promulgated by the Department for the Conservation of Historic Buildings and Sites. The Dutch heritage as a daily activity/practical experience
Education

These fields of knowledge are our parameters for the response of our educational institutes.

Delft University of Technology

How does Delft University fit into a possible new educational-scheme?
First of all we should state that in Delft the Dutch Architectural Heritage is regarded as material for our architectural task. Future architects are trained in the integration of the design processes used in preservation, renovation and re-use; they will know how to deal with the transformation of buildings and better building-performance and with regard to the evaluation of buildings and ensembles (town or landscape).
Current education is based upon the final terms (fields of interest), which deal with knowledge and skills which are summarized below:
- The ability to independently practice architectural and townscape restoration related to social, cultural, technical and economic tasks.
- Knowledge of the history of settlements and planning/land-use.
  With special attention to historical towns and ‘housing in the rural landscape (buitenplaatsen), related to current themes of building tasks and the sources from which the buildings originated, including the relevant cultural contexts.
- Knowledge of the history of architecture, historical architectural and ‘finishing’ techniques, with special attention to the private house/dwelling, related to current themes of buildings tasks.

Figure 2: Scheme on the integration of the design processes used in preservation, renovation and re-use.
- Knowledge of analysis and of the composition of architectural objects related to their formal, functional and contextual aspects.
- Knowledge of the way in which architectural, townscape and landscape plans are present and actually function on different levels of scale.
- Knowledge of building technology, especially of the construction of support, the finishes and the plant used.
- Skills to carry out independent architectural and townscape research to assist in design, planning and control.
- Skills in relation to the analysis, documentation and historical evaluation of several types of architectural monuments, with special attention to the integration of research and design.
- Skills to design plans for the restoration of valuable historical objects and ensembles, including the indoor and outdoor space
- Skills to manage the visual, textual and verbal techniques of communication in current use and to justify architectural redesign and research.

In the present educational situation we are confronted with a programme that is too condensed and which lacks both width and depth. The new curriculum, starting in the autumn of 2002, should bring improvements by introducing more concentration and also time for relaxation and reflection. A very important aim is to respond to the present and future relevance of restoration-needs continuing into the next decades, by providing programs, even though the best that is offered may still not be good enough.

We consider that this could be done in collaboration with Dutch Heritage and are communicating with them on this matter. We suggest that the broad aims could be accomplished, by clustering knowledge and letting this department play a central role in the educational field. The education in the necessary skill to would remain in the university as our main identity, and has to be further honed and perfected.

The basic knowledge to be acquired in the bachelor-phase of the study has to be thorough; specialization in knowledge and skills will come in the Master’s programs. The Master’s course will have its footprint in the studio-formulae, which means that the research and the design processed will be interactive. This will give more balance to the university as a scientific institute. Final study-programmes should also be relevant to the needs of society; they should position important social and cultural items on a higher level. There should be investments in good collaboration between research-workers and ingenious architects, stressing that methodology will make our work more comprehensible and interrelated.
So in the end we should come up with a programme that we could summarize as education and research in architectural-technical design, this being directed towards maintaining, adapting and re-using the building heritage and comprising the following fields of attention:

1. The development of methods and techniques for functional and technical improvement of renewal of performance, with special attention to the value of history and of future and computability with townscape.
2. Contributing to the development and renewal of the international heritage and to urban renewal.
3. The coherence between restoration, re-design and renovation and the difference between and specific identity of the different fields.
4. Considering the monument as a material, performing building in its spatial context and ordered pattern, and regarding this as a source of inspiration and of the collective memory of history.
5. The connection with and proximity to townscape design, building science, management, public housing and interior design.
6. The ability to utilize knowledge from different fields of science in carrying out the restoration-task.

Cases
The previous sections stressed the important link between research and design. It is very important to continue this and to strengthen the scientific approach to the building tasks concerned with our cultural heritage. We have to be aware of the constant transformation of our surroundings, and have to find our way and make our choices in an integrated manner.

How can we discover the social resistance to change on several levels of scale? How is it possible to find out what remains constant during change, in other words what is here to stay, and what will take up a new position? We have to grasp what is really important to work on, being aware that very often we look at an image of history: the 'restoration of the restoration'! The choices we make have to be thoroughly grounded: integrity, identity and authenticity are key words in this matter.

Last year, within in the module that we call the A4, we did some very condensed exercises with students on this matter. In this module, which is based upon a prescribed task leading to a change in function, students have to make an intervention in a historical settlement or scene. This was first done for a fortress near the Dutch coast (Fort Ijmuiden, part of the defences of Amsterdam').
Figure 3: Aeroview of Fort IJmuiden

Figure 4: Gezicht op Delft by Johannes Vermeer

Figure 5: Painting by Max Ernst, used as a part of poster
Later we worked on the painting ‘Gezicht op Delft’ (View of Delft’) by the famous Dutch painter Vermeer. Amongst other historical evidence, this 17th century two-dimensional painting was a source from which it was possible to rediscover and redesign the ‘edge’ of the historical city of Delft. So the real task for the students was to work within the limitations of the site (a very problematic present situation with big pressure from traffic for instance). This assignment had to be accomplished within a limited time by analysing and working in a methodological way in order to discover the potential of the site in relation to the programme. The realistic painting of Vermeer had to be interpreted so it was necessary to read between the lines to find out, for instance, what remains constant, in other words what has changed and what has remained constant throughout changes on several levels of scale.

So it is all about getting behind and beyond the frame of the picture and choosing a position in the what may be considered as a ‘palimpsest’ of the site. In this exercise it is therefore necessary to get ‘under the skin’ of the site: to find out its original meaning and what it could mean today with regard to historical facts.

The meaning thus derived had to be presented not just in an abstract way, it also had to contain a vision of architecture, ‘the making of the site’, in a way that the possible performance of the site could be grasped in three dimensions. I think that the importance of this exercise lies in the awareness of the historical dimension that we have to deal with and in the necessity of taking the scientific approach. This will rely on methodology involving thorough analysis carried out in an inspired manner. This should result in a creative process that must reveal the historical facts and conditions in their new setting and meaning.

Figure 6: Memory as a need to focus on our future
ANNEX A: Inventory of Dutch educational institutes in the field of the architectural heritage

<table>
<thead>
<tr>
<th>Field of Knowledge</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technische Universiteit Delft</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Faculteit Bouwkunde</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Restauratie, Renovatie en Herontwerp</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prof. dr. ir. F.W. van Voorden</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Berlageweg 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2628 CR Delft</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Universiteit Utrecht</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Faculteit der Letteren</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opleiding Kunstgeschiedenis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prof. dr. W.F. Denslagen</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kromme Nieuwegracht 29</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3512 HD Utrecht</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Universiteit Maastricht</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Faculteit der Cultuurwetenschappen</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prof. dr. M.C. Kuipers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kapoenstraat 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6211 KW Maastricht</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Universiteit Leiden</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Faculteit der letteren</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Geschiedenis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prof. dr. D.J. de Vries</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Postbus 9515</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2300 RA Leiden</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Universiteit van Amsterdam</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Faculteit der Geesteswetenschappen</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>afd. Kunst- en Cultuurwetenschappen</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prof. dr. A. v.d. Woud</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1016 BX Amsterdam</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rijksuniversiteit Groningen</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Faculteit der Letteren</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opleiding Kunst- en Architectuurgeschiedenis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prof. dr. E.R.M. Taverne</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Postbus 716</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9700 AS Groningen</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
5 fields of knowledge*

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hogeschool Utrecht</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hogeschool Zeeland</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Haagse Hogeschool</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Noordelijke Hogeschool Leeuwarden</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Academie van Bouwkunst</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

No own education in the field of Restoration en Renovation

A. Cultural values
B. Preservation
C. Redesign and renovation
D. Preservation of monuments in towns and rural landscapes
E. Contextual Knowledge

This table provides information which fields of knowledge are covered by the institutes, it doesn't say anything about the amount.
The need for typology

Dr. Bernard Colenbrander
Ministry of Education, Culture and Science
The Netherlands

The subject of this paper is the relation between the dead artefact of the monument and the living programme of the design task of today. How do they relate? My basic point of view is that they are not incompatible, but must be taken as two meaningful and relevant components of the same universe - a universe that is ruled by change, not by stability. The existing monument exhibits the decay of dead matter. From the programme comes the flux that brings it to life again. When you accept the changeability of the monument over time, you also accept that the relation that we have with the monument leads to a design task.

The changing monument is always adjusting to new circumstances: it was years ago that Professor Meischke wrote that after two or three times restoration will kill the documentary value of the building. He was completely and shockingly right. The design drawing may remain unchanged, but while being restored and redesigned the monument adapts itself. The exploration of this design task poses a problem not only for architects, but also for policy makers like me. What we intend to do is to shape the conditions in which the living monument can adopt characteristics of shining variation.

But first of all I want to tell you this: the treatment of historical landscapes, cityscapes and buildings throughout the ages is to be considered as an indicator of the state of culture. One may wonder how the relation between the treatment of the monument on one hand, and the vitality of culture on the other, can be described. What exactly does it mean when in a certain period the attitude towards the historical building is indifferent, or perhaps even hostile? What exactly does it mean when, on
the contrary, a society is very careful with the built structures of its past? Probably there is no one-way causality. Carefulness with monuments, for example, does not prove lack of vitality in the governing culture. And indifference to the past does not automatically illustrate straightforward acceptance of the here-and-now and of the future. The relation between the monument and the state of culture is a very subtle one, I think. It probably includes a paradox here and there; it encompasses real contradictions and complications difficult to understand. What we can say for the moment is that each historical episode has its own way of dealing with the past. In some decades the past is nothing, an object of complete indifference, with no particular function in connection with what is to be done now. Other decades indulge in adoration of the qualities that the past is supposed to contain.

At this particular moment of history, society seems to be in need of history, if only to counterbalance the dynamics of daily life, but this need for history does not necessarily connect to the *genius loci* of the personal built environment. The need for history can be fulfilled by the theme park, or by travelling to countries that are supposed to have remained pure and stable under modernisation. The need for history can probably be fulfilled by tasteless suggestion as easily as by sound historical construction, based on facts. Monuments can play a role in both: they act as historical facts while, at the same time they are a very evocative part of the scenery outside. What we can say perhaps is that monuments are an indispensable part of a more-or-less romantic view of culture, a view that binds together qualities of different times in one concept of ideas, visual qualities and morphological characteristics.

It is in this context that the idea of restoration comes in, as a technical instrument to support this romantic view. By restoration, buildings can be sustained, they can be helped to speak up about what they have lived through during their long life; they can be helped to detach themselves a little from the strains of the market dynamics. The treatment of the monument is almost automatically an issue that includes the interference of the powers of government. At the same time one has to recognise that the cultivation of a careful relation with the past is not the exclusive privilege of state authority, because the free market also has its influence and interest. It would be rude to tell you that the basic tendency of the free market is the destruction of the built past, because the dynamics of the production forces demand the permanent adaptation of landscapes and buildings. No, the market has its own obsession with heritage. The entire sector of tourism cannot do without the illustrations of a lost era, so monuments are all in the game. Sometimes companies also tend to need at least a *face* of history. Very often the presence of culture and history, is a relevant factor for them, when they have to choose where to settle.

The market needs the monuments and the government needs them, both parties with their own background, although I must say that in this respect the division between
the case of the market and that of the government tends to become more vague. These days government policy documents are very often supported, not by a coherent foundation of cultural ideas, but also by market research. It is as vulgar as that—consider, for example, the recent Fifth Memorandum on Spatial Development. It rests on public polls, not on a cultural vision. These two are not the same, and I have to confess to you that the absence of cultural reasoning and the popularity of market research makes it difficult to work for the public case at this moment.

It is necessary to try to be very precise about the basic reason why a government has to be interested in the monument in general, and in the treatment of the historical object in particular. We cannot afford to permit a situation in which people can no longer distinguish between the interest of state and that of market: they really represent different components of society, each with its own interest.

For the moment, as a general explanation of this government’s special interest in the monument, I would like to suggest that the monument gives us an important visual and tactile reference of the life we, as a culture, have lived before. This reference becomes even more important in an era of huge mobility and transformation. Now we are not so far from Asian scenes, in China or Singapore, in which one cannot die without, in the meantime, having experienced that the place of one’s youth has completely disappeared; it has been replaced by the next stage in evolution. It is in this kind of process that the cultural task of government has to be defined. Government interest in the monument clearly derives from the identity issue: the monument gives us a reference, which perhaps implicitly encompasses/implies/implicates an idea of understandable continuity in times that suggest otherwise.

Apparently the issues of identity and continuity belong to the monument. My personal impression from talking to people in the spheres of heritage and monuments is that they are insufficiently aware of the *Freudian* aspect of their inclinations and interests. From whence comes their basic impulse to conserve what we have or even restore it when it is not longer there? This impulse, says Sigmund Freud, comes from *trauma*. People with a complicated, unfulfilled relation with their own past, feel inclined to attach to it in an unhealthy way. As a matter of fact, Freud ‘discovers’ that nostalgia for buildings and environments is the natural sister of hysteria. They both are from the same family.

What we, as a government, can do to cure the monument-lovers of their nostalgia is to try to *connect* the monument more clearly and convincingly in time and in space. The monument has to be saved from its isolation—and the Ministry has quite consciously developed a policy to stress this point.

Of course, a lot of the attention of the Secretary of State and his officials is meant to address the interests of the objects of heritage themselves, each with its individual problems of survival. A significant part of our policy is about subsidy regulations, no more, no less. But I am happy to add that this concentration on the individual object is now being extended to the relation of the building and its spatial context,
while the dynamics of spatial evolution in time are now also recognised as a policy target. This is not merely an abstract game, interesting for intellectual reasons; it is also very practical. The connection between monument and space and time is intended to cause a healthy, evolutionary relation between past, present and future.

What about the first policy aim, to extend the area of interest from the object to its surroundings? Now that the post-war era is gradually entering the field of vision of the heritage industry, one has to admit that many potential monuments are not interesting merely for individual reasons. Post-war architecture is highly collective, very often built in series. Twentieth century architecture shows the invention of urban planning, the erosion of the individual icon and the rise of off-the-peg architecture, with high numbers and a collective face.

The question of what we can keep as a monument of this era is breath taking. What do we want to retain, for example, from Van Eesteren’s brilliant plan for Amsterdam West? Do we keep only the two-dimensional aspect, that is to say: the planes of red, blue and green and the lines in black of the floor plan? Do we give up the complete third dimension of all these abstract apartment buildings? This is a really complicated issue, playing a role right now, on a huge scale and still new for the monument organisations that we have. Whatever is decided in the end, the answer to questions like these cannot be to choose only a few magnificent blocks of flats, while tolerating the fact that the surroundings entirely disappear. The tradition of post-war architecture cannot credibly survive if only a few lucky examples are selected. Perhaps the second dimension of the urban plan should be considered as more valuable than the third, but in that case too, the solution is not easy.

Then follows the policy aim to connect the historical landscape in time. We all are aware of the fact that a building has a life of its own. It is more an organism than an object. One cannot keep a building, as it is, however desperate the wish for continuity may be. The first aspect that collapses during evolution is the use of a building, the programme. The second aspect that goes to heaven is the built fabric, and thus the third dimension. The toughest, hardest component of the built environment, developing in time, appears to be its floor plan, its second dimension. This is the basic reality of spatial behaviour. When one wants to build up a relation with the monument, one has to be aware of this: it is a clue, which may advise you what to do and what to avoid.

The Ministry has tried to cope with the issue of ‘the built environment on the move in time’. For the moment the outcome was the Belvedere Memorandum. This memorandum stresses the importance of development-oriented treatment for historical landscapes and monuments. It tries to provoke impulses that will connect characteristics from the past with trends of actuality. To complement the Belvedere
memorandum, the Ministry has come up with the architecture memorandum, called *Designing the Netherlands*, which reflects the same interest in spatial developments and spatial evolution. Connect the monument in time and in space. I think that this is the moment to invent some kind of basic typology, in which the treatment of the monument is fixed into a series of examples. As far as I have discovered, there is no such typology yet, although preliminary work has been done by Crimson, in the intelligent study from a few years ago, called *Re-Arch*. I like what they did, but have started on my own. I want to present you with a personal sketch for a typology. The examples show the basic directions thought we can follow when considering what may happen when a building is transformed in time and space.

I want to start with the real basics, in three examples, taken from life, from my own daily surroundings in The Hague.

The first example is the Congress Building, designed by J.J.P. Oud, a building that is about 30 years old and is heavily used, and see what happens. It will never reach the age of 50 years, after which official protection may become effective. As soon as it was finished, the first interior corrections started, but in the eighties came the real extensions: the Statenhal, simply pushed against the light blue boxes of the original. After that came the next extension, in the late nineties: the Dorinth Hotel. This time it was not pushed against the light blue, but the extension simply landed on top of the older building. It was dropped on it, like a bomb, imploding in the core of the light blue. The idea of the Congress Building is this: a building appears, it adapts to life, it grows, it grows, it takes new colours and shapes, it implodes, it implodes again. It disappears.

*Figure 1: Congress Building, J.J.P. Oud, The Hague*
The second example is the fifteen-year-old *Black Madonna* apartment block in the centre of The Hague. Carel Weeber designed this block, not to be beautiful, but to be indestructible. He failed. The building will be devoured by the dynamics of the market, because the municipality has decided to change urban functions here. In few years time the Black Madonna will simply be flattened and replaced by a series of towers, supervised by the current international celebrity Richard Meier. ‘In evolution it is almost always crunch time’, to quote the American philosopher Daniel Dennett, and that remark fits perfectly here.

The third example is the Municipal Museum of The Hague, the last building of H.P. Berlage, dating from the thirties. This building was immediately recognised as a very special one and this was indeed true. But in the decades up to the nineties its status did not prevent normal evolution. That meant *grosso modo* the same history as the Congress Building, although to a lesser degree: interior corrections and extensions. But as the building had a cultural function, which is normally less destructive than commercial functions, it survived. After 60 years it was anointed as a ‘holy building’, that deserved to be restored its authentic quality. So: extensions were cut off. The building was more or less frozen and detached from normal evolution.

Now, we have the three basic histories of buildings. In the first history, the building adapts itself continuously to changing conditions. In the second, the building is wiped away after someone in power declares it superfluous. In the third one, the building acquires holiness and becomes forever untouchable. You can adapt the examples of the three basis histories to any building you like, and you will find out that they work. But happily, specific arguments from the domain of culture and
architecture may bring in some subtle distinctions in the threefold system that I have presented. The basic typology of the treatment of monuments is therefore more varied and recognises a lot more shades of grey. And it is in these grey shades that the design task shows itself.

What happens when a building has to be transformed and an architect stands up and tells us: ‘I am just as good as my predecessor, the trick of the original can be repeated in the vocabulary of our own time’? In that case you get something like the Betondorp in Amsterdam, dating from the twenties, but rebuilt in the eighties with the aesthetics of the eighties and with strangely distorted references to the aesthetics of the twenties. The basic attitude followed here is that of recycling, or re design and the effect is certainly decorative. But after living with it for a decade, we have to admit, I think, that it is a failure in architectural terms. Re design is all right in principle, but it demands more than muddy decoration: it involves clear-cut decisions that may do violence the original. However, if the mutual tension finds a new, delicate balance the result may be magnificent. The building has to tell us exactly what its old state of being consisted of, and the addition has to be a kind of tattoo or scar.

The Betondorp shows recycling with adapted raw materials. The materials and motives are actualised. Recycling can also be done with unchanged raw materials. The idea is to start all over again, without fundamentally changing the architectonic rules. This is what has been done in Rotterdam, with the complete reconstruction of the...
Kiefhoek neighbourhood, a world-famous example of social housing from the twenties, by the same architect who concluded his career with the Congress Building in The Hague, that is presented above. The Kiefhoek had been treated very badly by both users and owners and, as a matter of fact, was on the verge of complete collapse. Moreover, its essence, consisting as it did of hundreds of very marginal and small workers houses, could not be saved since people are no longer prepared to live in such houses. In this context, the reconstruction meant the reconstruction of the image of the neighbourhood, while changing the content: providing new floor plans that were big enough to survive. Reconstruction of the image: bringing in the argument of culture here meant opening the door to nostalgia. We didn’t want to lose the Kiefhoek, but we knew that it could not be saved by reasoned argument. That is why we all like it, even though recognising the chosen characteristic of kitsch.

Recycling in its different variations is an important part of my typological system. Another part is made up by the addition and subtraction sums that have also been discovered by the inventors of Re-Arch. One and one make two. The addition of a new part to an old building may lead to a fine collage, at least when a good architect is involved. In the Netherlands we know how to do this, certainly since the Functionalist Architects chose the clearly demarcated addition of the new as one of their articles of faith. In the last decades, Hubert-Jan Henket has designed fine examples in this category, all in the atmosphere of museum building. For example the Teylers Museum extension in Haarlem, or his Catharijne Cloister Museum in Utrecht. The old building is saved and made to shine. The new building has its own beauty, in careful details and modest architecture.

Sometimes the One-and-one-makes-Two-formula is used with more than usual vigour. The new addition presents itself as a clear-cut layer in the composition, literally breaking into the old building. That is what Koen van Velsen did in his design for the State Academy of the Arts in Amsterdam, dating from 10 years ago, and a fine and courageous example of violent architecture. One and One sometimes makes not Two, but rather seems to strive at One Whole, as if the intention was to add something new, while at the same time striving for cohesion as if nothing new has come in. This seems to have motivated Charles Vandenhouse, a Belgian architect, in his recent design for the Royal Theatre in The Hague. Vandenhouse does not see a principal difference between his own position and that of the architect in history. Therefore he makes a new whole, out of both old and new components. The contemporary design task is not seen in dialectics, as the position Henket chooses, but in shared aims and means. Vandenhouse happily avoids the decorative effect of the Concrete Village, although in principal his position not very different.
Then we have another variation in the game of addition and subtraction. Sometimes it appears necessary to give away one fundamental characteristic, while firmly accentuating another one. This is what may happen with the churches that we have. They have always been very prominent in the urban fabric and the landscape, which is why we do not particularly like to blow them away. At the same time their programme no longer serves a need, because we have stopped going to church.

How do we solve the dilemma? We give up the architecture and restate the building in its urban meaning. The canonical example of this attitude is the Vondel Church in Amsterdam, beautifully positioned on a modest street square. Demolishing it would unsettle a complete neighbourhood. So the building was allowed to retain its external appearance keeping its primary meaning – while its interior was ruined during its adaptation to become an office.

I have already shown the Municipal Museum in The Hague, as an example of a *holy object*, brought back to its authentic beauty and kept that way. In the typology of monuments as a design task one should certainly distinguish a special category for *Eternal Life*. Some buildings have the quality to become older, while they easily survive the transformation of human habits and the dynamics of the market in time. How do they manage that? How do they remain virtually unchanged without losing their function and meaning? Take the superb apartment block in The Hague, at the corner of the Laan van Meerdervoort and the Zeestraat, designed by architect Wegerif in the late twenties. The building was for the well-to-do, so it was designed to be spacious, luxurious and solid. Being a little bit too big, too lavish, and too reliable
makes a building unassailable. This building survived a transformation into a Ministry building shortly after the Second World War and later a transformation back into apartment building - without getting ruined. Other buildings in The Hague, but also for example in Amsterdam South, have this same combination of strength, spaciousness and luxury that keeps them alive through the ages, hardly posing a new design task every decade.

Now I conclude my sketch of a typology with the reverse of architecture with an eternal life. The last chapter of the typology is based on the treatment of a historical building with complete disassembly, followed by total re-assembly. A shocking new example in this category was recently finished in Utrecht: the City Hall, redesigned by Enric Miralles. What we see here is that the architect almost literally broke his way into the building, took what he found and imagined what he could use again, and then remounted the components of the building in a totally new spatial concept. The design is a collage, in which historical fragments are used as freely as possible. The result is quite shocking. History cannot be followed in this building in a linear pattern: it is mixed up, and used for a free pattern that is dictated not so much by the laws of history, as by the laws of architecture. This is really free style – and I must admit that I cannot get enough of this building, after having trouble with it during
the first months after I had been introduced to it. So there we are, distinguishing a design task for the historical monument that may start with the holy object, untouchable through the ages, and that may end with the free collage of Enric Miralles. For us, at the Ministry, it is above all interesting to stress that we not only base our policy aims on the interests of the monument as an individual object, but also on the intelligent diagnosis of the possible treatment, its adaptation to time and space. That is what we need the typology for and that is why the revolutionary, perhaps even dangerous, example of the Utrecht City Hall is so important - as a very basic reference, on the verge of the thinkable.

Figure 14, 15, 16 & 17: City Hall, renovated by Enric Miralles, Utrecht
European approach to “The Future of Restoration”
Background

Scotland has a rich tradition of building in masonry, the evidence of which is readily found in the innumerable structures constructed of sandstone, granite, whin and a variety of other types of stone. During the 19th century Scotland’s quarrying industry contributed greatly to the country’s wealth and offered employment to many. Taking into account city, town, village and estate sources it is estimated that over 1,200 quarries were operating to produce good quality building stone. Exploited in a variety of ways, the different stones were worked to produce many fine buildings. This was made possible through a unique combination of masonry craft, available material, and an enabling financial climate. Developing and expanding sea and rail transport links contributed to the growth, and international trade connections ensured a flourishing export market.

By 1900, circumstances had changed and the subsequent consequential effects of two World Wars hastened a major decline in the use, understanding and availability of traditional building materials. Although a brief revival occurred during the 1920’s and 1930’s, it was well into the 1960’s before an awareness of indigenously produced stone started to re-emerge with any significance in the minds of designers and specifiers as a traditional building material. By that stage the country had lost much of its intuitive awareness of the material, how it should be worked, handled and detailed. Furthermore, following the growth in use of modern substitute materials in the post-war era, the many variables associated with traditional masonry construction generally made it impossible to ensure ready compliance with the emergence of
numerous building codes and standards. Aesthetic considerations overruled its structural potential.

With a few exceptions, the country had turned its back on the indigenous craft based industry. In preference, it accepted unquestioningly the developed, but untried, modern alternatives. These promised much but, unfortunately, time has shown that they generally lacked longevity of life in use. From the perspective of undertaking sensitive conservation and restoration work on existing buildings, the combined effects of these inappropriate influences are all too readily seen. Buildings inevitably suffered as a consequence.

However, over the last decade, an increasing public awareness of conservation matters has been steadily gaining ground. With this has arisen an acknowledgement, and a growing understanding in some professional circles, of the need to re-learn what we have lost so that the future well being of our built heritage can be assured. In this process much remains to be done as the practitioners frequently requires researched knowledge and understanding in support of their decision-making processes.

**Raising the Standard**

As a Government Executive Agency, Historic Scotland is an integral part of the Scottish Executive. It is directly accountable to Scottish Ministers who, similarly, are directly accountable to the Scottish Parliament for its performance. Historic Scotland’s central mission is to ensure that a broad range of people can enjoy the contribution made by the built heritage, both now and in the future.

The Agency’s “Framework Document 2001” notes that the built heritage is of intrinsic worth, of national and international importance, and an integral and vitally important element of Scotland’s first National Cultural Strategy. It also notes that, being irreplaceable: “Conservation of the built heritage creates a demand for the production of Scottish materials and for craft skills, which contributes to the wider cultural skills base.” Historic Scotland therefore has an established clear policy which focuses on the need to ensure improved performance and awareness from all sectors of the construction industry involved in building conservation work.

As this strategy developed it inevitably placed a considerable demand on support training and education all levels. But it could not be achieved in isolation, so working with others was critical. The key need was to find a way to build upon existing courses and facilities to establish more effective links across craft, technological and professional boundaries. The emergence of a parallel development to create a suit of Vocational Qualifications in Architectural Conservation produced the necessary vehicle. This emerged as other related initiatives, such as professional body Accre-
ditation schemes, were also taking shape. An ideal opportunity arose which allowed an integrated approach to be developed. At its core was the desire to improve operating quality and standards in the field of practising conservation.

Whilst many interpretations exist of what conservation means, ICOMOS, in their 1993 Guidelines on Education and Training in the Conservation of Monuments, Ensembles and Sites, suggests that: “The object of conservation is to prolong the life of cultural heritage and, if possible, to clarify the artistic and historical messages therein without the loss of authenticity and meaning. Conservation is a cultural, artistic, technical and craft activity based on humanistic and scientific studies and systematic research.”

As it turned out, this internationally accepted document persistently emerged as the key strategic reference point to which most, if not all, steps in Historic Scotland’s developmental process to raise technical conservation standards can be related.

**Historic Scotland’s Technical Conservation, Research and Education Group (TCRE)**

Undertaking appropriate conservation, or for that matter carrying out effective repair and maintenance, stems from a detailed awareness of the building, its site, function and use; the skills and materials used; the technologies adopted during construction and subsequent repairs, and the climatic and related decay influences.

In the past a natural confidence existed in the comprehension of these integrated factors that we no longer possess today. To help address that dilemma, Historic Scotland’s Technical Conservation, Research and Education Group was set up in 1993. Its primary objective was to improve the operating quality and standards of practical conservation work. To do this it set about:

- addressing issues of loss to the built heritage
- networking with relevant bodies
- establishing strategic partnerships
- encouraging the revival of key industries
- working with education and training establishments
- investigating the supply of traditional building materials
- undertaking appropriate associated research
- publishing relevant technical material

Against that background the Group’s principle objective can be summarised as the need: “To research issues and develop skills relating to the built heritage, and to raise the standards of conservation practice among owners, trade and professional groups.”
Primarily the Group was charged with providing informed technical support for Historic Scotland’s’ Historic Buildings Repair Grant-aid schemes, and to offer practical conservation advice for the in-house work programme on 330 Properties in Care. As the Grant-aid programme currently injects some £11 million per annum into the Scottish building industry and directly occasions some £60 million of construction related business each year, the potential sphere of influence from this approach was considerable.

The Group functions with an integrated structure of 3 Divisions
The Research, Education and Training Division has the responsibility of addressing quality and setting technical standards. It commissions and controls research which leads to the production of technical publications through contracts, negotiated partnership arrangements or Minutes of Agreement. It works with a variety of industry and professional lead bodies and has long established training and education links across Scotland. These have allowed Historic Scotland to capitalise on the expertise and abilities of a wide number of organisations and bodies for mutual benefit and gain. To maximise on such arrangements the Agreements often span a number of years. This approach has the additional benefit of assisting the practitioner, educator and student all at the same time.

The Historic Scotland Conservation Centre is a specialist hands-on conservation Division that operates in the fields of structural painting, easel painting, and stone conservation. It is also charged with producing specialist Reports that offer conservation advice in support of the Agency’s repair grant scheme, and scheduled monument and listed building consent processes. It provides a limited degree of specialist repayment work for the private sector and supports the Scottish Conservation Bureau’s intern and fellowship programme through work placement experience.

The Scottish Conservation Bureau (SCB) is the central focal point for conservation information in Scotland. The SCB was established in 1980 as part of the Crafts Division of the Scottish Development Agency and was transferred to Historic Scotland in 1991. It has a holistic interest in all Scottish conservation matters. Over the years, Bureau staff have compiled, developed and maintained a number of comprehensive, publicly accessible, databases. These now contain relevant up-to-date information on a wide range of Scottish conservators, building contractors and practitioners. In support of other Scottish conservation interests, the Bureau disburses some (limited) support grants for workshop set-up and training. Staff also run a dedicated Intern and Fellowship programme to augment the private sector pool of available conservation skills and expertise in Scotland. Finally, the Bureau provides the mecha-
nism for marketing and selling the Group’s technical publications. Completed work is published in the form of Conference Proceedings, Research Reports, Reference Reports, Practitioners Guides and Technical Advice Notes (TAN). (See Annex A for current list)

To disseminate information and launch research findings a series of major conferences have been arranged by TCRE. Aiming for one major event every two years interspersed with a local event, the programme commenced with the International Stonecleaning Conference (1992). Subsequent events have included Lime Technology (1995), Traditional Building Materials (1997), Fire Protection and the Built Heritage (1998) and Scottish Traditional Roofing (2000). Lime and fire were also international events. All have been successful and fully supported by educational, professional and industry interests. For example, the Group’s Scottish Traditional Roofing Conference held in Edinburgh on 1 November 2000 attracted 210 delegates and was planned as a precursor event to the related International Federation of Roofing Contractors Conference held on 3 and 4 November 2000. During these two events, four related TCRE publications were launched. Presenting the concluded results of three different research projects these consisted of -
- Scottish Slate Quarries TAN
- Scottish Slate: Potential for Use in Building Repair and Conservation Area Enhancement Research Report
- The Pattern of Scottish Roofing Research Report
- Abstracts of Scottish Traditional Roofing Conference

To assist in maintaining the position of Historic Scotland as the lead body in Scottish building conservation matters TCRE will continue to develop its established expertise so that it can act and advise on:
- Policy aspects of technical conservation, research and education relative to Scotland’s built heritage.
- Offering excellence in oral and published pragmatic advice on technical conservation matters.
- Commissioning research into traditional building materials and construction techniques relating to the built heritage.
- Working towards ensuring that practical conservation work is guided and informed by the results of appropriate research.
- Producing and promoting up-to-date relevant technical literature aimed at improving the knowledge and capabilities of specifiers and practitioners.
- Raising the standards of craft-based, technological and academic courses, and Continuing Professional Development (CPD) delivery, for those who work with the built heritage.
Effective Conservation Networking
With the desire to undertake effective conservation work comes the need to understand the associated philosophy and ethics, how materials perform, and how to limit imposed stress and damage on existing buildings. Restoration occasions the need for a fuller understanding of original construction techniques, whilst new-build requirements need to distinguish more between the aesthetic and structural use of traditional materials.

With a view to creating effective and relevant links in this complexity, since 1993 TCRE has been instrumental in setting up four conservation networks in Scotland:
- Scottish Conservation Forum in Training and Education (SCFTE)
- Rural Buildings Conservation Initiative (RBCI)
- Scottish Stone Liaison Group (SSLC)
- Scottish Historic Buildings Fire Liaison Group (SHBFLG)

These networks have the aim of taking a strategic overview of developments in traditional materials and skills supply, and where issues of major risk exist. The problems involved in turning round the complex conservation sector are considerable. It can only be achieved with the full cooperation of all involved. At the outset there needs to be a recognition that a difficulty exists and that future demands for their resolution will emerge. Although education is at the heart of this process, each topic requires its own particular emphasis in the diverse needs of the conservation, restoration and new build markets.

Scottish Conservation Forum in Training and Education
Established in 1994 the Scottish Conservation Forum in Training and Education (SCFTE) was initiated by TCRE as a Scottish network that links with other similar National structures. The Forum’s working framework states that, with regard to developing the best in Scottish education and training in building conservation, Historic Scotland will host the Forum with the aims of:
- Keeping members informed as to relevant national and international developments
- Acting as a focus group for all interested parties
- Exchanging appropriate information and data
- Co-operating across trade, technical, professional, accrediting, and industrial boundaries.

Meeting at six-monthly intervals, the SCFTE has acted as an effective focus group for all involved in the development of skills and knowledge in the field of Scottish conservation. Members freely give of their time and come from a wide range of Universities, Building Colleges, Industry, Industry lead bodies and Professional Bodies. The common strand is where conservation interests currently exist. (See Annex B for list of members) Well-attended meetings keep participants informed of
relevant national and international developments, and act as an exchange mechanism for the dissemination of appropriate information and data.

Resulting in effective co-operation across trade, technical, professional, accrediting and industrial boundaries, the Forum has been successful in raising, integrating and enhancing the awareness of a wide range of Scottish conservation issues. To aid this process, and as part of its remit to outreach and educate, TCRE freely issues copies of all its published technical information to the member bodies. The intention is to ensure that emerging material is more readily absorbed into the various institutes standing curriculum by enabling the educators, whilst assisting students develop in their associated studies.

**The Rural Buildings Conservation Initiative (RBCI)**
The RBCI is another focussed group. It was established by TCRE to specifically look at issues affecting rural buildings, their repair and conservation. Along with Historic Scotland colleagues, it includes representation from the:
- Institute of Historic Buildings Conservation
- National Museums of Scotland
- Association for the Preservation of Rural Scotland
- Architectural Heritage Society of Scotland
- Scottish Civic Trust
- Scottish Agricultural College

It has a particular interest in vernacular building matters, associated conservation training, the availability of traditional building materials and how appropriate advice can be offered to the public and professionals. Meeting twice a year, the Initiative enables a ready exchange of information about current developments, and how that can influence those involved. It also aims to identify unwelcome gaps in knowledge in this area of concern, and assists with valuable networking to help resolve difficulties with the associated topics.

TCRE worked with the Initiative to undertake a pilot study into the *Conservation and Conversion of Rural Buildings of the Lothians* (the Region in Scotland surrounding the city of Edinburgh). Aimed at architects, surveyors and planners, the emerging Practitioners Guide, launched in May 2000, investigated how these structures could be more sympathetically adopted for modern day use. This publication is being promoted as an example of model guidance that could well be applicable to other regions of the country.
Technical Publications and Associated Key Initiatives

With the intention of improving practical conservation and restoration work, TCRE technical publications support a variety of official policy documents. They are officially issued to Scotland’s various academic, vocational and heritage bodies, and to all Scottish local authority Chief Executives. On release of new material, it is specifically requested that it should be read in conjunction with Historic Scotland’s 1998 primary policy document “The Memorandum of Guidance on Listed Buildings and Conservation Areas”. The same technical material also underpins the Scottish Executive planning policy document NPPG 18 Planning and the Historic Environment and provides support for Historic Scotland’s “Stirling Charter: Conserving Scotland’s Built Heritage”, launched at Stirling Castle in January 2000.

Working from its developing research base, TCRE represented Historic Scotland on the British Standards Sub-committee that devised BS7913: 1998 Guide to the principles of the conservation of historic buildings. This Guide is important because it provides information, advice and guidance that is equally applicable to ancient monuments, special building and important civil engineering works. It also offers a range of relevant definitions where these can be regarded as having a precise, or technical, meaning in the context of building conservation. More significantly, BS 7913 offers official recognition of the idea that modern day Codes and Standards may not always be applicable for use on historic building work. In particular it notes that, in some circumstances, “it will be necessary to follow professional experience and judgement, on the basis of what has been proved to work”.

Taken together with national developments to produce a suite of Vocational Qualifications in Architectural Conservation; the emergence of professional body Accreditation schemes; and the international relevance of the 1993 ICOMOS Conservation Training and Education Guidelines, a number of key initiatives were found to be in place that supported Historic Scotland’s strategy to improve conservation standards at a variety of levels.

At present, the 1993 ICOMOS Guidelines are the only internationally recognised standards for upholding the quality of the UK’s post-graduate courses in architectural conservation. Behind their production it was the ICOMOS aim: “To promote the establishment of standards and guidelines for education and training in the conservation of monuments, groups of buildings (“ensembles”) and sites defined as cultural heritage by the World Heritage Convention of 1972”. The 14 summarised Guideline functions create an invaluable starting point for the development of a coherent, and consistent, educational process for professionals working in the field. In introducing the various topics the document states that: “Conservation work should only be entrusted to persons competent in specialist activities” and emphasises that “focussed education and training should produce a range of professional
conservationists who are able to undertake the Guideline functions”. In essence, the functions set out how practitioners should undertake a conservation project from inception to completion. The guidelines encourage those involved to operate from a sound philosophical and ethical base, so that they fully understand what they are dealing with. The aim is to ensure that an appropriate diagnosis is made and relevant actions undertaken.

Like the UK Post-graduate Conservation Course Directors, Historic Scotland saw considerable merit in adopting the guidelines as an effective framework upon which to focus a number of developments. Consequently, they are embedded in much of the networking activities and thinking of its TCRE Group.

The ICOMOS Training and Education Guidelines also informed the drafting work on the Stirling Charter which, to ensure consistency in application, uses the definitions established by BS 7913: 1998. In its final form the Charter addresses Scottish Conservation needs through -

Article 1 – Actions to secure conservation
Article 2 – Presumption in favour of preservation
Article 3 – Management in a sustainable way
Article 4 – Assisting enjoyment, appreciation and learning
Article 5 – Conservation requirements.
Article 6 - Role of relevant parties

Buildings do not have to be recognised on an official “List” to have the same technical requirements as those covered by Statute. Many structures can be of similar age, be constructed of the same materials, and have identical problems to be overcome. Addressing and resolving the needs of those structures and sites that are deemed important can therefore have an equal validity for those that are not.

With the “repair and maintenance” sector now accounting for over 50% of the annual construction spend in the UK, the case exists for the need to create a better correlation between what is taught and what the industry actually requires. Whilst it may be too simplistic a parallel to make, a recent survey of Architectural opinion, published in the Architects Journal of 22 March 2001, reported that 46% of responding Architects considered that their architectural education did not give them a suitable training for practice. In the same survey, 25% of Architects considered that the current skills shortage was the second largest threat to their profession, whilst the professional “Conservation” work sector had risen from a zero base in 1999 to become 4% of the “identified new business opportunities with the most potential in 2001”.

73
To be successful in the repair of historic structures requires an equal balance of knowledge, appropriate available materials and well-trained skills. Put any one of these three factors out of sync, and difficulties will ensue. Until recently the general training and educational processes in the UK did not offer much of relevance for the well being of existing buildings. The majority of the emphasis was, and largely still is, placed on teaching and understanding new-build technologies. This approach could be argued as being at the heart of many of difficulties that confronts much of the repair and maintenance sector of the construction industry at this time. A better understanding of how traditionally constructed buildings were erected, how they performed, and how they decay, is therefore required by most current professional disciplines, technologists and craft sector practitioners.

Consequently, in assessing future workforce requirements, a wide range of necessary skills, hands-on experience and trained understanding is often deemed essential, but is frequently unavailable. Such a lack of indigenous expertise readily identifies additional training demands and educational needs if the operational quality and standard is to improve. Given the high loss levels in what should, ideally, be an intuitive understanding of traditionally constructed buildings, the underlying issues of who “educates the educators”, “trains the trainers” and “supplies the supplier” urgently need to be addressed. To ensure a relevant imparting of knowledge, skills and awareness in the process, TCRE’s work strategy attempts to address these inter-related matters.

Craft skills - the National situation
Recent Construction Industry Training Board (CITB) data on available skills forecasts over the period 2000-2004 projects a Scottish shortage in bricklaying, plastering, scaffolding, roof-slated and tiling trades. This projection was set against 1998 statistics for the United Kingdom where only 3,765 stonemasons were recorded against 117,715 bricklayers. Given the high proportion of pre-1919 Scottish buildings that are constructed of stone, and are in need of appropriate maintenance, these statistics alone create great cause for concern. They also demonstrate that the ability to deploy appropriate skills in the repair and maintenance sector of the construction industry can be badly mismatched. Such a deficiency can only result in a diminution of the attributes of the building, as appropriately trained craftsman may not be available to undertake quality repair work. Furthermore, given the 50/50 split of the industry between new-build and repair and maintenance, it could be argued that up to half the current work force is insufficiently trained for the work it actually does. Strategic changes need to be initiated to rectify this.

Construction remains one of Scotland’s most important industries, and the country provides 1 in every 5 UK recruits. With each recruit costing £20,000 to train, it is important to ensure that the input levels in this process are correctly pitched. Such a
concern is behind Historic Scotland’s desire to ensure that the construction industry is as well prepared as it can be to undertake appropriate standards of conservation work in the future.

**Scottish Stone Liaison Group**

Such a challenge and the need to have an integrated approach to masonry work is at the heart of the Scottish Stone Liaison Group (SSLG). Officially launched as a private sector company in May 2000 this multi-disciplinary Group was created by Historic Scotland to work through a range of issues highlighted by the 1997 TCRE Research Report “A Future for Stone in Scotland”.

The immediate aim of the SSLG is to pull together all aspects of the Scottish stone industry so that it emerges as a more effective, cohesive and meaningful force. To help achieve this, an industry-wide integrated Business Plan has been developed. Founded on the 1997 Report, this 3-year plan proposes realisable activities for the Group’s three “Project teams”. By building upon the available of range indigenous materials, and developing professional and craft skills, enhanced by the introduction of modern working practices, the chance of a Scottish stone industry renaissance has become a real prospect.

In recent years, the need for a better understanding of lime technology in traditional building construction has been highlighted as an issue of some considerable importance. So, with the intention to introduce a more appropriate element of conservation skill into the workforce, the Construction Industry Training Board (CITB) was recently asked by the Scottish construction industry to devise a set of new National training Units in traditional mortars and masonry construction. Prepared by the Scottish Lime Centre Trust (SLC) these craft orientated training modules were approved by the Scottish Qualification Authority and launched in February 2001. Offered as part of the Scottish Vocational Qualification (SVQ) in Stonemasonry, or as individual courses, the units deal with:

- Technology of lime
- Preparing and using basic lime mortars
- Preparing hydraulic lime mortars
- Building and repointing traditional rubble masonry with various lime mortars
- Conservation masonry involving hot-lime mortar work, grouting and repointing ashlar

Successful completion of the 3 Units leads to the award of the SLC’s *Certificate in Conservation Skills - Traditional Masonry*. To assist in the process, the package is currently supported by TCRE’s 3 technical publications on lime as a building material and another, on the use of lime renders, is imminent.
Scottish Historic Buildings Fire Liaison Group

TCRE has also been addressing the issue of fire loss to the built heritage. During the last 15 years a series of major heritage fire losses have occurred in Europe, and in Scotland alone one important historic building is being lost each month. Against such a finite resource any structure or authentic fabric lost to fire is irreplaceable. Appropriate steps need to be taken to reduce this unacceptable level of destruction. As part of this process, Historic Scotland’s Technical Conservation, Research and Education Division (TCRE) published TAN 11 “Fire Protection Measures in Scottish Historic Buildings” in September 1997. TAN 14 “The Introduction of Sprinkler Systems in Historic Buildings” followed. Launched at the TCRE International Conference on “Fire Protection and the Built Heritage” in October 1998, associated Proceedings were released in 1999. Following further work, TAN 22 “Fire Risk Management in Heritage Buildings” was launched in February 2001. This latest Note is aimed at helping reduce fire loss by promoting an effective assessment technique that fully considers the implications on fabric and contents.

To support Historic Scotland in its work, a Scottish Historic Buildings Fire Liaison Group was formed in 1995. Membership of the group involve representatives and bodies who cover a wide spread of related interest in Official body, Fire Brigade, Professional body and Heritage body categories.

Given the particular threat to heritage buildings, and the need to address their special problems of protection, the Group is currently advising on a proposal to establish a National Information Database to help stem the current high level of loss to fire of Scotland’s Category A Listed Buildings. Such information would be of considerable assistance to fire fighters should such incidents continue. The proposal follows a three-month pilot scheme that occurred during the summer of 2000. This project developed a pro-forma for gathering information, tested data-gathering techniques, and quantified the resources required for the proposed nation-wide exercise.

The value that can be obtained from the issued technical guidance on fire protection is shown by the increasing adoption of such advice by the Scottish Fire Brigades in dealing with historic buildings. A recent beneficial case of such a positive impact was the extinguished outbreak of a potentially disastrous electrical fire in an important terraced historic building in the heart of Georgian Edinburgh in February 2001. Here, detection equipment had been sensitively installed in accordance with the TAN 11 guidelines, but other major historic building losses, such as Morgan Academy, Dundee in March 2001, continue. Much still needs to be done in this area of concern and, as a key priority, development work on a Scottish national database will continue, as resources permit.
At international level, a lack of multi-disciplinary expertise exists in dealing with the pragmatic problems on the ground. This creates a need to further promote and co-ordinate the various national research interests into the frequency, causes and elimination of fires in historic buildings.

**Conclusion**

TCRE is in the front line of determining quality and standards in assisting in the delivery of related practical training and professional education to the conservation world in Scotland. To continue to assist in this process it is anticipated that a further 20 technical publications will be released over the next three to four years.

Building upon past successes, the Group’s future operational aim is to encourage excellence in conservation work through advice, practical demonstration, lecturing, participation in research, promoting seminar and conference programmes, and undertaking related committee work. This will involve:

- Maintaining an influential role in determining quality and setting national standards.
- Providing excellence in technical and professional expertise.
- Supporting research into materials and processes.
- Raising the standard of relevant skills-based technological and academic courses.
- Maintaining and developing a service provision of the highest possible calibre with reference to current best practice and legislative guidelines.
- Enhancing training provision with reference to relevant Building Colleges, Undergraduate and Postgraduate schools, S/NVQ, Professional Body Accreditation Schemes and the ICOMOS Training and Education Guidelines.

TAN (Technical Advice Notes)
TAN 2: Conservation of Plasterwork (1994)
TAN 4: Thatch and Thatching Techniques (1996)
TAN 5: The Hebridean Blackhouse (1996)
TAN 7: Access to the Built Heritage (1996)
TAN 10: Biological Growths on Sandstone Buildings: Control and Treatment (1998)
TAN 12: Quarries of Scotland (1997)
TAN 15: Traditional Lime Renders (Pending)
TAN 16: Burrowing Animals and Archaeology (1999)
TAN 17: Bracken and Archaeology (1999)
TAN 20: Corrosion in Masonry Clad Early Twentieth Century Steel Framed Buildings (2000)
TAN 21: Scottish Slate Quarries (2000)

Research/Study Reports
- Stonecleaning in Scotland - Research Summary (1992)
- Stonecleaning in Scotland – Literature Review (1992)
- Biological Growths, Biocide Treatment, Soiling and Decay of Sandstone Buildings and Monuments in Scotland
- Cleaning of Granite Buildings
- The Future of the Scottish Burgh Survey (2000)
- The Pattern of Scottish Roofing (2000)

**Guides for Practitioners**
- Conservation of Historic Graveyards (2001)

**Conference Proceedings**
- SSLG Launch Abstracts (2000)
- Scottish Traditional Roofing Conference Abstracts (2000)

**Other Publications**
- Dictionary of Scottish Building (1996)

**Reference Reports**
Annex B: List of Scottish Conservation Forum in Training and Education Members

<table>
<thead>
<tr>
<th>Organisation</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction Industry Training Board</td>
<td>Glasgow</td>
</tr>
<tr>
<td>Conference on Training in Architectural Conservation</td>
<td>London</td>
</tr>
<tr>
<td>Duncan of Jordanstone School of Architecture</td>
<td>Dundee</td>
</tr>
<tr>
<td>Dundee College</td>
<td>Dundee</td>
</tr>
<tr>
<td>Dundee University</td>
<td>Dundee</td>
</tr>
<tr>
<td>Edinburgh College of Art</td>
<td>Edinburgh</td>
</tr>
<tr>
<td>Glasgow Caledonian University</td>
<td>Glasgow</td>
</tr>
<tr>
<td>Glasgow College of Building and Printing</td>
<td>Glasgow</td>
</tr>
<tr>
<td>Glasgow University</td>
<td>Edinburgh</td>
</tr>
<tr>
<td>Heriot Watt University</td>
<td>Edinburgh</td>
</tr>
<tr>
<td>Historic Scotland</td>
<td>Edinburgh</td>
</tr>
<tr>
<td>Inverness College</td>
<td>Inverness</td>
</tr>
<tr>
<td>James Watt College</td>
<td>Glasgow</td>
</tr>
<tr>
<td>Mackintosh School of Architecture</td>
<td>Edinburgh</td>
</tr>
<tr>
<td>Manifesto Foundation for Architecture</td>
<td>Edinburgh</td>
</tr>
<tr>
<td>Napier University</td>
<td>Edinburgh</td>
</tr>
<tr>
<td>Perth College</td>
<td>Perth</td>
</tr>
<tr>
<td>Royal Incorporation of Architects in Scotland</td>
<td>Edinburgh</td>
</tr>
<tr>
<td>Royal Institution of Chartered Surveyors</td>
<td>Edinburgh</td>
</tr>
<tr>
<td>Robert Gordon University</td>
<td>Aberdeen</td>
</tr>
<tr>
<td>Scottish Lime Centre Trust</td>
<td>Charlestown</td>
</tr>
<tr>
<td>Scottish Qualifications Authority</td>
<td>Glasgow</td>
</tr>
<tr>
<td>Scottish Stone Liaison Group</td>
<td>Edinburgh</td>
</tr>
<tr>
<td>South Lanarkshire College</td>
<td>Cambuslang</td>
</tr>
<tr>
<td>Stone Federation Scottish Section</td>
<td>Edinburgh</td>
</tr>
<tr>
<td>Telford College</td>
<td>Edinburgh</td>
</tr>
<tr>
<td>University of Northumbria</td>
<td>Newcastle</td>
</tr>
<tr>
<td>University of Paisley</td>
<td>Paisley</td>
</tr>
<tr>
<td>University of Strathclyde</td>
<td>Glasgow</td>
</tr>
</tbody>
</table>
Figure 1: A wide range of skills and experience is called for when dealing with the repair of historic buildings.

Figure 2: St Magnus Cathedral, Kirkwall
Traditional building techniques incorporated a ready understanding of the materials that were used and how they could be fully exploited.

Figure 3: Torthorwald Castle, Dumfries
Working with historic structures requires a full awareness of how they were first built, what materials were used in the construction and how they have performed over time.
**Figure 4:** The use of inappropriate materials during the most simple of repairs can have a dramatic and unfortunate effect on the visual appearance of the finished results.

**Figure 5:** Sensitive repair work needs can be accommodated provided the knowledge, skills and appropriate materials are available for the project.
Figure 6: The use of modern material in the context of the repair of traditional construction must be carefully dealt with otherwise more complex problems can emerge in trying to resolve the issues.

Figure 7: Training and skill is an essential part of carrying out effective conservation work.
Figure 8: Morgan Academy, Dundee. Category A listed building, destroyed by fire 21 March 2001 (Copyright: D.C.Thomson & Co Ltd.)
Belgium has a very long tradition of the 'Restoration of monuments'. Organised Monument preservation is as old as the country itself, and started 1835 with the creation of a 'Commission Royale des Monuments'. Today too, Belgium places much value on her historic heritage and expends great effort to preserve it. The title of this contribution is very general, but I was asked to explain the current situation on preservation practice in our country.

Belgium is a meeting place of different cultural traditions (the well known distinction between the Latin = French, and German = Flemish traditions), and in the field of preservation also, we sometimes see slightly different attitudes in the north and the south of the country. But generally speaking, the situation in Belgium is not different from that in other West European countries. During recent decades, the restoration discipline has developed considerably. Without extending the arguments, I summarise the most evident and the most important ones:

1. Changes regarding the content of our discipline, i.e. the broadening of the monument-concept from the strict etymological "quia monet mentem" to the up-to-date broader idea of the "lieux de memoire" or even the "virtual monument"! These changes have increased the number of registered monuments and listed buildings in Belgium from about 250 items in 1970 to around 15,000 to day! But even this 15,000 is much too small a number in the context of the total volume of historically valuable buildings in our country. Obviously, this number remains limited because of frequent resistance of the owner concerning the limitations to
his property rights and also that of public authorities because of the financial implications of such registration (subsidies!). As a consequence of this explosive growth, and the ‘democratization’ of the monumental object, it became necessary to adapt procedures, criteria and intervention methods in restoration practice. One cannot operate for 100,000 items in the same way as one does for 250 ‘official (elite) monuments’.

2. Changes regarding the practice of our discipline. Up to the nineteen-sixties, it was traditional to see historic buildings as pieces of art or kinds of museum objects and they were also treated as such. Today, historic buildings (or “monuments”) are seen as architectural and/or urban objects – the consideration of their artistic dimension (when there is one) is less dominant. For this reason, the impact of architectural and urban criteria and values becomes more important and are more applied. Such considerations quite often create conflicts or duality within the art historian and/or archaeological values and the architectural (= functional) values.

3. Changes in society: many people try to compensate the alienation of the modern way of life and modern housing patterns by seeking the traditional environment and tangible contact with earlier times. This explains the great success of all initiatives regarding monuments and traditional buildings (these are exemplified by the success of “Open Monument Days” and the numerous initiatives or local and national societies in this field, the most important of which are the Flemish and the Walloon Heritage Foundations. Another recent experience of this kind was the ephemeral reconstruction of part of the Saint Lambert Cathedral in Liège during the summer of 2000).

4. These changes have had great consequences for the existing urban heritage – in Belgium, and all over Europe. The overall attitude to dealing with existing buildings (= urban heritage) in a more economic and cautious way, also led to important changes in the building industry. According to recent statistics presented by the Belgian Scientific and Technical Centre for the Building Industry, more than 60% of all building projects in our country are fully or partly “renovation” or “reconstruction” projects. New building becomes a minor part of the building industry – because in the city centres, it is usually more appropriate to renovate (or restore) than to build new volumes. Sometimes this is also done to retain the existing building volume, while modern building regulations no longer allow new building at the existing density).

The appreciation of the existing heritage also gave birth to the so-called “Monument Watch” (inspired by the Dutch example) as a public service that is responsible for regular inspection and advice regarding the maintenance of both public and private
historic buildings. It also promoted the re-discovery (very slow and with great difficulty) of traditional skills - here is a great duty for education and proper training! We must thank the authorities and the politicians of the past decades, as many monument-friendly structures have been built and they work quite successfully.

I also take this opportunity to plead for a proper terminology in our discipline, especially relating to the usage of the two words “renovation and restoration”. Reading the name of this host-department “Department of Restoration, Renovation and Redesign” already indicates the possible confusion about the precise type of intervention (and precise type of methodology and criteria to apply). As a matter of fact, today most “restoration”-projects are a combination of “traditional restoration” (i.e. preservation or ‘reconstruction’ of historic materials and historic forms) and ‘renovation’. Renovation implies the addition of structures or their conversion into new structures and new facilities in order to adapt those building to a new or a better use. It is important to use the proper word for the proper intervention – because of the different financial consequences (i.e. subsidies) of these operations, and because of the different theoretical and methodological principles applied in the project.

Coming back to the specific situation in Belgium, I will briefly distinguish, six aspects, without any polemics or polarisation.

1. The technological and business point of view
I have already mentioned that more than 60 % of all building activity has to do with renovation or restoration.
Three days ago, I visited the ‘Restoratiebeurs’ in ‘s Hertogenbosch. I found, once again that in the same way as we can see in Belgium and in the other countries (for example. ‘Renospecto’ Fair in Ghent or the Bourse de la Rénovation in Liège, and of course, similar exhibitions - in Leipzig, Paris, and Birmingham) the ‘Restoration Business’ has become an important and highly qualified sector in Building Industry. That means that new products and techniques are always being developed, and that many enterprises, architectural firms, artisans and different kinds of specialists have found their living in this sector.

2. The administrative and organisational point of view.
Today, in Belgium we have a quite appropriate legal system with juridical instruments for protection, restoration and maintenance. Official listing or protection of the most important objects makes a distinction between ‘monuments, urban or rural sites, and landscapes. There is also an excellent inventiorisation of all valuable buildings, covering the complete country (i.e. the ‘short inventory’ in about 100 volumes). As ‘heritage protection and restoration’ has a mainly “cultural” dimension, it is organised by the “cultural authorities” of the country and, according good Belgian traditions,
this means that we have four different legislations and administrations responsible for the historic heritage, i.e. the Flemish, the Walloon, the German, and the bi-lingual Brussels Region. Of course, this does not simplify practice, (e.g. a Flemish architect projecting in Brussels has to follow different procedures than he is used to in Flanders; the same applies to a Walloon enterprise working in the German Kantons) but I must say that it works, and quite efficiently. This is not different from the case in other countries such as Germany, where the different ‘Länder’ also have their own regulations, (and maybe the UK also similar).

3. The town-planning and urbanistic approach

Some of you, who are familiar with Belgian urbanism, may know that Belgium does not have a great reputation or tradition on this point. As a matter of fact, the first legal regulations date from 1964 and only since that period have individualism and permissiveness very slowly changed into more community related attitudes.

As monument protection and restoration traditionally depended on the Ministry of Culture, and the town planning traditionally depended on the Ministry of Public Works, during the 1970’s and 1980’s, we have seen many conflicts of interest, often supported by political considerations! One of the latest examples is exposed by the difficult and long progression (from 1970 to 1996) of ‘the Act of the protection of Landscapes’ (16.04.1996) – it took more than 25 years to find an agreement between all parties!

Conflicts of interest related to specific projects, of course, are happening frequently, very often related to private interest or financial investment. Two recent examples:

- The ‘renovation’ of the Casino of OOSTEND, a building designed in 1960 by the Belgian architect Louis STIJNEN. In 1996, a project developer proposed a ‘renovation and extension’ project, surrounding the existing volume by a ring of new apartments, designated as being ‘necessary to finance the restoration of the existing part’. Local authorities were in favour of the project, but an ‘action group’ of neighbouring people together with lovers of ‘modern movement’-architecture, was able to convince the Minister of Culture to start protection procedure as a historic monument and in this way, the project was stopped! It was an interesting case for two reasons:

- Once again, the Minister of Culture had to take over the responsibilities of a Town Planning Department that had failed (or did not wish) to intervene. In other words: a feigned or forced application of the preservation legislation because planning authorities did not accept their responsibilities; (This does not always work as e.g. similar attempts to protect the modern ‘Martini’-tower (dated about 1960) in Brussels two month ago, were not successful!)

- This case was also interesting because of the type of a building concerned (a modern building which was not of a very special quality, and, for this reason,
was not yet protected). So it contributed a lot in the discussions on valuation of ‘young’ monuments.

- The still ongoing discussions about value, use and way of restoration of the ‘Thurn and Taxis’-site in BRUSSELS. This is an extraordinary complex of industrial archaeology that has already been protected as monument for several years, into which investors would like to integrate a so-called “Music City”. In the most recent project, they propose to dismantle some of the great spans, and reconstruct them in another position on the same site. It seems that recently, other alternatives have been presented, and that a compromise may be found.

Another, more general, up-to-date problem within town-planning aspects, relates to the so-called ‘zone strange buildings’, i.e. existing (and sometimes listed) buildings which do not correspond to the indicated function of the zoning plan (‘structure plan’). An example is provided by a residential building within an agrarian or landscape zone, or an industrial building within a residential zone. According to legislation, in the long term such ‘zone-strange buildings’ have to disappear. But of course, this creates problems concerning listed monuments. This is a new problem, resulting from the recent approval of the “General Structure Plan for Flanders” (i.e. the plan on macro-level for the entire Flemish Region). It has to be solved by proper legislation within the short term!

Within the same context of this “Structure Plan for Flanders”, zones of special ‘Cultural, Historical and Aesthetic value’ (= ‘CHE’ zones) were identified; but it was a pity that there was no design of a “Main Heritage Structure-plan” (Erfgoed Hoofdstructuur). This could have greatly helped in the formulation of coherent policy and strategy for urban and landscape preservation.

Generally speaking, ‘preservation’ and ‘town planning’ have to be integrated and more intensive and interdisciplinary co-operation between different authorities should be practised. One is working on it, as for example the fact that recently the services of the ‘Flemish Master Builder’ (‘Vlaams Bouwmeester’) have integrated some civil servants seconded by the Monument Protection Department. Also within the private sector, one becomes convinced that such co-operation is an absolute condition sine qua non.

4. The artistic and historic point of view
From the art-history point of view also, we see an important change. Formerly, restoration was usually directed by art historians or by architects who also had a degree in art-history or archaeology. Since, from the 1950’s on those disciplines developed towards independent and full scientific specialities, it became more difficult
to combine the studies of architecture with those of art-history. And as both disciplines do have their own specific methodologies and criteria, the difference in the opinions (and relations) between art-historians or archaeologists, and architects were often problematic. This situation is now developing in a good direction in the sense that both disciplines have found their specific contribution and responsibility in restoration projects. We see this also in the evolution of specialised education.

As scientific advisor responsible for the postgraduate course in monument preservation at the Hogeschool Antwerpen, I have seen the evolution since 1975, the year we started, to today. In the early years, on the average there was a population of about 30 students a year. Of these, art historians or students from the philosophical faculties made up about 25%, today they form about 50 to 55% of the population. This has certainly to do with the higher professionalism and the interdisciplinary approach necessary in modern restoration projects.

Because of time limits, we cannot speak about the archaeological heritage. I only mention that the protection and the study of the archaeological heritage of Flanders has also recently been organised by a specific “Act on the Archaeological Heritage” dd. 30.06.1993

5. Architectural aspects
I already mentioned the fundamental changes in architectural practice in the historic cities and villages: most projects are renovation and/or restoration projects. The extension of scale (from 200 to 100,000 potential monuments) and the evolution of the ‘monument concept’ and restoration philosophy considerably changed restoration practice. I do not intend to go into this matters, and I refer to the recently approved basic document, the “Charter of Cracow 2000”, a natural sequence and updating of the “Charter of Venice 1964”. We had a special symposium on this topic some months ago, at Gent University (03 Feb. 2001), in which some of you also participated. (1)

Within this approach, I should like to mention only two considerations:
- The relation between ‘restoration’ and ‘architecture’ – architecture as the discipline that has to combine the three basic characteristics: utilitas, firmitas and venustas!
  As I said before, in modern restoration practice, the balance of values and criteria pays more attention to the architectural characteristics of buildings and towns, despite their historic and/or artistic aspects. – this is quite different from the situation in the 19th century (and even up to the 1960), in which the art historical values prevailed. This creates great responsibility for modern restorers, especially about the acceptability of modern contributions (technical as well as architectural structures) and about the material and the design of such new contributions.
Sometimes, an architect cannot restrain his/her passion for the creation of new things, and will place his/her 'signature' on the building. Such architects use the historic structures, but do not consider them as basic and essential to the 'identity' of that building.

We learned – in our time! - that in 'monument preservation', architecture must be subordinate to history (or to 'the documental' value) – and I think that this is still a good principle, but compromises concerning 'pragmatic value' are necessary, and usually, 'compromises' never completely satisfy!

Redesign is acceptable in 'renovation', but not in 'restoration'!

Many opinions are available, and it is often difficult to distinguish between orthodoxy and fundamentalism – especially when the result is a good architectural project, but one in which the monument has been amputated, deformed or become unrecognisable. Unfortunately, this happens too much these days – also in international awarded projects!

It is not possible to discuss this very important matter within this short time, and I refer to the contributions of one of the preparative conferences of the 'Cracow 2000 Charter', completely dedicated to this matter (2).

Another result of this changing mentality, as a kind of reaction, is 'non-intervention', or the 'fear of intervention'! As the first principle of preservation is of course: 'conservation comes before restoration', it is sometimes argued that 'status quo' is much better than any other intervention, even when this could offer a much better use or longer life. I am convinced that higher architectural quality or better up-to-date use must sometimes be "paid" for by a small loss of authentic material or small change of authentic structures. This is one of the essential differences between the restoration of buildings and that of museum objects, which usually have little or no pragmatic function. Architectural and urban heritage has been created to be used and 'lived in'. Changes in use always demand changes in physical structures and insistence on 'absolute conservation' is an impossible and unreal attitude!

This also, often creates conflicts between architects and conservators!

6. Methodological aspects

On this matter, I can easily confirm that restoration practice in Belgium has slowly been uplifted to international standards of methodology and scientific approach. This has been the great merit of the different educational bodies (Universities, Academies, Specialised Institutes, Training courses, ) and Public Authorities, who always increasingly insisted on scientifically justified projects within a multidisciplinary approach.
Today, it is obligatory for all who are planning projects involving work on protected buildings to collect and study all useful artistic and historic information, to exhaust archives and iconography, to analyse and compare the existing structures and materials in all their physical, chemical and mechanical characteristics. The project has to be prepared by following a logical decision process with the intervention of different disciplines. The same procedures have to be followed during execution of the work, which has to progress step by step, always being open to adaptation or change where necessary. All this should guarantee an optimal result. This approach implies much higher qualifications and professionalism from the architect and the operating team (historian, material expert, structural analyst, and urbanist), and requires education and training provided by specialised courses on post-graduate level.

In this context, I refer to what we heard this morning about “Training” in architectural preservation.

**Restoration – quo vadis? was the question of this symposium**

I conclude by saying two things:

- First as a comment on what I heard this morning regarding the “Training” aspects, specifically here at the TU Delft. I was a little astonished about the, in my opinion, superficial way the ‘restoration training’ was presented as being one of the many aspects within the education of architectural engineers. It is totally impossible to make a good restoration project after having followed a module only of two months duration! Such a module might be excellent as a general introduction, but is certainly not enough for the student to become familiar with the specific methodologies and evaluation techniques, or with the traditional materials and construction technologies within ancient buildings. Within the modern education structures real preparation for restoration projects is only possible at post-graduate level (e.g. as it exists in Belgium in Antwerp, Louvain and Liège). In this regard it should be very important that a clear distinction is made between what you call “restoration” on one hand, and “redesign” on the other. Both types of intervention are fundamentally different in level, and each of them has different ‘values’, a different framework and different random conditions. Many important historic building are mutilated and even definitely destroyed by so-called ‘redesign’ projects! I would like to go more deeply into this matter during the discussion time.

- The second thing is really a conclusion of my talk about the situation in Belgium. Restoration in Belgium today is quite well organised and can continue in the current direction. The necessary administrative instruments are available, but in my opinion making all ‘monuments’ equal by placing them on the same level of protection (i.e. without any differentiation regarding values or significance) gives too high a risk of possible ‘disfigurement’ of the historic document by too violent
commissioners or too hasty (hurried) architects. From an architectural point of view, the up-to-date attitude of quite easily accepting trendy architectural forms and materials and sometimes also very drastic functional conversions, might also be an important threat for the future.

Permissiveness and fundamentalism are the two extremes between which a good restoration has to find its balance.

**References**


Restoration in the Netherlands

Marc van Roosmalen*
Government Building Agency of the Netherlands
The Netherlands

Introduction

As an architect I am convinced of a strong connection between restoring and designing, between the architecture of the past and that of the present. In the Netherlands there was, and maybe still is, a schism: a gap between modern architecture and the restoration of historical buildings. It seems as if modern architecture in the Low Countries started only with the work of the architect Berlage, around 1900. Buildings dating from before this period were more or less disregarded or treated as if they were not interesting. It seems to me that this was the result of an early process of disassociation from the 19th century architecture, with its eclecticism and abundance of decorations.

Our task is to bridge this gap. We would be unwise if we neglected to learn from earlier architecture and did not consider these buildings as part of our cultural history. They are part of our cultural inheritance: they form our architectural memory. We narrow our consciousness too much if we fail to take into account the whole of building history, including not only the theoretical but also the practical features, by

*Since 1982 Marc van Roosmalen has been involved as architect at the Government Building Agency of the Netherlands. He restores and redesigns historical buildings, connecting the old and the new in various projects including those involving museums, archives, courts and prisons.

Since 1987 he has worked with Marlène van Gessel, in an architectural practice specialised in architecture in historical settings.
re-using, re-inventing, re-designing and re-storing the buildings. This is a challenging task! We need the best skills and knowledge that we have; in fact we must invest in the best talent of our generation.

In the countries of southern Europe, for instance Italy and Spain, there is a self-evident tradition of dealing with historical buildings: a well-known continuity of maintenance and change. In these countries history and architecture are very close connected, almost an ideal situation.

In trying to put this philosophy into practise I found out that the basic requirements for making an integral qualitative architecture demanded receptiveness to and understanding of the character of the existing buildings. Thorough research into the history of the buildings and the spirit of the place is therefore vital. Guiding principles are the reversibility of modifications and additions, the maintenance of historic stratification and the use of authentic materials and patinas. It is essential to search for contrast at detail level and to strive to ensure the readability of the new layer. Nevertheless I have discovered that a dogmatic approach is mostly not very useful; on the contrary it is often counterproductive. So from time to time the guiding principles, which direct the (re)designing, have to be set aside for the simple reason that architecture cannot be dictated by rules.
Figure 3: Nightview of the glass-covered courtyard of the Zuiderzeemuseum
National Records Department, Maastricht (Rijksarchief Limburg)

The redesign of this historical complex in the heart of the old centre of Maastricht, with its variety of types of building and styles, was quite a challenge. There were many defects in the building complex, such as poor maintenance of the medieval church, problems with the climatic conditions, logistic and functional difficulties and a serious shortage of space. The useful space should be more than doubled, while the vulnerable location restricted the possibility of enlarging the complex almost to zero.

Brief history
The complex consists of a 12th century church, the remains of cloister buildings and additions from the 17th, 18th and 19th centuries. It is located at the edge of the underground remains of a former city wall dating from the 13th century. There is even a small river flowing underneath the complex.

After four and a half centuries, the cloister lost its religious significance and became an arsenal for the defence of the city. Two centuries of decay followed until, in the last quarter of the 19th century, the military function was lost. As an example of the revival of the national-historic feeling, the church was restored and used to house the public records. Much later, in the 20th century, the other wings of the complex were partly demolished and severely changed, being completed in a historical style.
At that time reinforced concrete and other new materials and structures were introduced in the remaining buildings.

**Iceberg**

Inspired by the thorough historical investigation and the severe restrictions of the location, we made a plan based on the principle of an iceberg. By doing so, we created a lot of space, enormous cellars for the storage of archives. Above these underground spaces I designed a quadrangle by adding a new wing. Given the need for functional space, we even created new cellars underneath the existing buildings.

**Realisation**

First of all we lowered the foundations of the existing buildings to the depth of the foundations of the church. After that we made a watertight excavated building site laying six meters below the average water level, to build the new cellars. After the concrete cellars had been constructed, we worked on what was a more or less normal building site.

**A brief tour**

The opening between the church and the wing on the Pieterstraat provided a natural route to the entrance. The actual entrance is in the portico, which has been cut open to admit the southern light from the inner court into what was formally a dark alley. In the entrance hall attention is drawn to the second court: the new quadrangle. The glassed-in public walkway alongside the church is flanked by the open space extending to the service-street on the level of the first cellar to provide light and sight. Via a slightly inclined bridge over this space one finally gains admission to the church, now designated as reading and study room. This has a majestic spatial effect.
Breach
The facade of the entire complex presented a rather closed and unwelcoming image. For this reason it seemed as if the work of the public records was going ahead in an inaccessible complex, which was entirely contradictory to its public service function. There was a growing need to make an opening. Historical investigation showed that in 1940 the wing on the Pieterstraat had been extended over the old city wall, therefore creating a morphological break with the history of the city. This was a concrete reason to make some kind of an opening there. One of the most evocative tasks of the archivists, the restoration of historical documents and papers, could then be brought to the attention of the public. After numerous sketches the idea arose that, in this sober but complete facade, a simple breach, rather than a controlled designed form would be sufficiently expressive.

Church
The three-dimensional axial effect of this church is so powerful that new elements such as the mezzanine floor, study-cells and the furniture have been introduced as loose elements. In contrast to the marlstone church, these elements are made of steel, lead, wood and glass. Even the new black concrete floor in the nave and the side aisles is kept free of columns and walls.
In the choir, the original 19th century tiled floor has been re-laid, but in the centre there is a raised glass surface on which the medieval tombstones have been placed. Beneath the choir, an underground room, the auditorium, has been created. The rough marlstone foundations immediately confront anyone going down into this cellar. Looking up through the dark glass ceiling one sees the undersides of the heavy gravestones and, between them, the seemingly immeasurable height of the vaulted choir, with its frescos.

**Outcome**

The result of this project is a succession of three-dimensional experiences and ambiences of history, culture and modern use. This was not an outcome of a premeditated scenario; it was a process of the growth and ripening of the dialogue with the forms, shapes and character presented by the complex and the programme of requirements.

**Figure 11:** Service-street, with the glassed-in public walkway

**Figure 12:** The first courtyard. In the foreground, the retaining wall of the cellar; in front of which the medieval citywall
Figure 13: The new restoration workshop, with the breach on the inside

Figure 14: Breach in the elevation of the wing on the Pieterstraat

Figure 15: Choir with raised-glass surface on which tombstones are placed

Figure 16: The auditorium, beneath the medieval tombstones
Zuiderzeemuseum Enkhuizen

The Zuiderzeemuseum is a museum depicting the disappearing life and culture around the former Zuiderzee. This almost enclosed sea was tamed in 1932 by the construction of a huge dyke and by the reclamation of half its area to create new land. People lives were for centuries very strongly connected with the sea.

The museum consists of two parts. On the one hand is an open-air museum with dozens of houses and buildings arranged as little villages and as a little town, while on the other hand, there is a museum complex consisting of several buildings of different ages. This complex, which forms a city-block of about 30 by 100 metres, comprises twelve different buildings, which date from the 17th century to the 20th century. Some of these buildings have a pure historical origin while others have rather hybrid characters. Several of the buildings were moved from different locations in the city of Enkhuizen and altered so that they could be rebuilt in the museum complex. Other buildings were specially designed for the museum by adopting a more or less similar traditional style. Between these buildings there were left-over spaces, which formed gaps in the museum complex.
History reveals that in the 16th and early 17th century Enkhuizen was a major and very wealthy city in Holland. In this period enormous warehouses and merchant’s houses were built along the east harbour. The 18th and 19th century was a time of decline and most of the buildings were demolished and used as a quarry for building materials, only a few warehouses remained and they became part of the museum complex.

All together it was an intriguing complex but not an accessible museum. There were several levels not accessible to the public. The routing for the visitors was confusing; orientation was difficult and even the entrance was quite hard to find. On top of this there were many functional and logistic problems.

Based on investigation and analyses of the complex, we re-interpreted it as a whole. The key to the solution was found in the courtyards at the heart of this city block. With the entrance via the existing porch, we situated the new entrance route in its heart, passing through the two courtyards and, at the end of this route, designed a new glass-covered courtyard that was created between the existing buildings and a new exhibition building. This is where the actual museum starts.

The new climate controlled exhibition building is located alongside the West India Company building and includes the new main stairs and lift. On the first floor level
Figure 23: Landscape of roofs of the museum complex

Figure 24: The new main stairs with a view into the city centre, between the existing and new exhibition building

Figure 25: Shiphall with the new adapted gallery at the first floor level
all the buildings are connected by a series of strategic adaptations in a related style. At various places there is a view out into the courtyards and over the surrounding city with its harbour. In the new semicircular roof exhibition hall there is even a wide panoramic window revealing the entire historical city of Enkhuizen.

To achieve a more abstract atmosphere we used less traditional materials, such as glass, steel and concrete, in contrast to the existing buildings, which are largely constructed from bricks, oak and stucco. The relation between the old and the new buildings was created by using form, colour, light and space. In this way the original character of the complex has been preserved, while the renewal of the complex has created a new experience.

For the first time in its half-century of existence, the complex is functioning as a whole: as one museum. The moderate financial means dictated the use of well-chosen sober solutions with maximum impact. This circumstance sharpened the spirit of the design.

*Figure 26: View from the east harbour at the completed museum complex*
**Strengthened Den Bosch**

An actual problem for those arriving by car is the entrance to and the car park capacity of the historical centre of the city. Moreover, for most people driving into a parking garage, then leaving it and walking into the city centre is not a great pleasure. In my view this has much to do with town planning. We cannot deny the necessities of modern life; we have to deal with the problems created by our desire for mobility. We must search not for compromises but for real integrated solutions. Adapting an anological position inspired by history, we must explore the possibilities to discover or maybe to uncover the right solution.

The medieval city of 's-Hertogenbosch, the capital of the province of Noord-Brabant, has an attractive square near the Cathedral; this now functions as a car park for about 200 cars. There was a strong wish to get rid of the cars from this historical site. At the same time the capacity of the proposed new car park had to be increased to more than 900 cars. There is only one problem: the proposed location was quite some distance away, outside the 17th century city walls. People using it had to cross a busy ring road.

Our study of the city structure and morphology and its history made clear that the parking garage should be out-of-sight. It should be located beneath the original moat in front of the city walls, which had disappeared. Research showed that technically this would not be easy, but it would be possible. The cars could use a corkscrew entrance in the nearby bastion to go down. From the newly created three-story deep garage, the surface could be reached via stairs, at which point one would be standing below the water level and surrounded by the moat. A path through the
Figure 29: Reaching the surface by stairs (ref. Tadao Ando, Japan)

Figure 30: Path through the water to the opening in the city wall

Figure 31: Section through the citywall and the entrance level
water, as it were, brings one to the 5m-high city wall in which an opening will be made. This is where the real entrance of the city, at the medieval level about 4 meters below the actual surface is situated. Even the original medieval city wall can be seen here. From there on it is quite easy to cross underneath the ring road and enter a little park that leads to the cathedral area. By such stage-managing, the disadvantage of the long distance is reversed; it will almost become an adventurous route through different environments and times.

In our view this result illustrates that the demands of a modern city can be reconciled with its historical structure and that this can lead to new experiences of space and time.

**Figure 32:** Crossing underneath the ring-road. View on the medieval city wall

**Figure 33:** The city wall seen from the medieval level, the new entrance of the city

**Figure 34:** The little park towards the new underground car park
Tragedy in three acts ... eventually with a ‘happy ending’

Dr. António Sérgio Rosa de Carvalho
Architectural historian
Portugal

First act: the Golden Gate.
On the 6th of July 2000, the Portuguese exchequer and audit department sent an official report to Parliament, which stated that the Expo’98 Project had resulted in a debit balance totalling 113.6 million contos (1 conto = 1.000 escudo’s, 566.7 million Euro). This comprised a difference of 96.6 million contos (483.4 million Euro) between the expenses and income and an extra amount of 17 million contos (84.8 million Euro) that was injected by the government in 1998.

Despite this the result of the Expo’98 Project is seen as being a positive one. An extraordinary recuperation of an urban perspective has been achieved in a huge area, with a remarkable potential for leisure activities in its relationship with the River Tagus. This is an area with a past characterised by heavy industry connected with the harbour and an oil refinery, which was in very poor environmental condition and is heavily polluted. Through various urban, commercial and social ‘strategies’,
the continuity of the dynamics of use and activity in all the larger areas that were vacated after the closure of the Expo, has been guaranteed (learning from the mistakes of Sevilla). Consequently the organisation has used the event as an opportunity to extend the metro network, connecting (via large suburban areas) the eastern riverside coast with the central and western ones. This realises the ‘old dream’ of the city of Lisbon to return to the river Tagus, just like the recovery, urbanisation and use of the extensive area of the riverside between Belém and the Expo that has been achieved.

Theoretically, at the beginning of the project the main idea was not to incur any expenses, but rather to finance the project entirely from the profits made by selling the recovered ground. This was to be sold as sites for the construction of big buildings such as the head office buildings of different companies, for public services and for huge residential areas. Residential areas that are seen as being attractive, although mainly occupied by the ‘well-off’ families of young urban professionals, who are very aware of their personal territories, privacy and anonymity, and who fill up their daily activities with the processes of ‘jogging-office-parking’ and equipped with walkman, mobile etc. In this way, this urban area, with its carefully thought-out plan, distinguishes itself from the nightmarish immensity of the ‘unspeakable’ suburban areas, that spreads out like an oil stain through the 18 City Boroughs of Lisbon. This image is used as an illustration of the unnatural, uncontrolled and rapid sprawl of these suburban areas, without the guarantee of elemental infrastructure like public transport or the provision of water supplies or of drainage systems.
Figure 3: The 'Temples of consumption' and 'Social Mobility' (on credit) are still being built.

Figure 4: Portugal builds in a speculative way double the average number of new residences in Europe. (Portugal 10 residences for 1000 inhabitants; Europe 5.1 residences for 1000 inhabitants)

In 1960 18.2% of the total population of the country was concentrated in the Metropolitan Area of Lisbon (AML). In 1970 the resident population of this area comprised 22.5% and in 1980 26.6%. Finally by 1991 the population reached had 27.3%: a percentage that corresponds to 2.5 million inhabitants.
Today we do not know exactly how many people are living in this area. In recent years a continuous and growing flood of immigrants from such different areas of the planet as Africa, Asia and also Eastern Europe are attracted by the 'grand travaux' and their illegal position makes them vulnerable to the speculative and unscrupulous
attitude of many ‘bosses’ and building companies. This situation increases the pressure in the suburban areas and encourages the continuous building up of tensions that constitute an authentic suburban ‘time bomb’ that will inevitably cause a sociological explosion in the near future.

The Expo’98 was one of the high points of these ‘grand travaux’ but not the last. Others have been prepared such as the TGV (high speed train) planned for the Spain-Portugal connection, the new Lisbon airport, the gigantic weir of Alqueva and the facilities for the Euro’2004 European Football Championship.

This succession of major works started from the moment when Portugal joined the European Union. Since then different events like the XVII European Exposition of Art and Culture (1983), the organisation of the European Capital of Europe (1994) and the organisation of two presidencies of the European Union have been accomplished. One of these left us with a building that resulted in an enormous expenditure that greatly exceeded the estimated costs: the Cultural Centre of Belém.

This period was sustained by continuous and permanent financial ‘injections’, structurally guaranteed by the Common Funds until it reached an accumulated amount of 5.500 million ‘contos’ (27 million Euro) from 1986 to 2001 345 million contos a year (1725 million Euro). At a certain moment this permitted Portugal to exceed the development level of Greece in 1990 and also left the Portuguese people with the illusion of a true economic development. This period was characterised by consumption phobias, well illustrated by the systematic building of shopping centres and hypermarkets of pharaonic proportions and by the uncontrolled buying of houses and cars on credit.

The housing speculation by the building societies and the barbaric colonisation of the territory and the landscape, resulting in the massive and growing disorder and chaos, can only be compared to the spontaneous eruption of mushrooms. This brought Portugal to the situation of a country which builds at double the European rate: this means 10 new residences per 1000 inhabitants, compared to the average of 5,1 residences per 1000 inhabitants of Western Europe. We have to remark that the profits from the building licences represent 40 to 50% of the total income of the city authorities. It is also useful to compare this situation with the percentage of reconstruction and restoration of accomplished in some Northern European countries, which covers 60 to 70% of the total building activity.

The favourable economic period that Europe has experienced and the low interest rates have taken the Portuguese families to a level of debt determined by the continuous and easy-to-obtain credit that in some cases has reached the irresponsible
Figure 7: The speculative pressure on the 19th century areas has destroyed any hope of resistance. The 'battle' has been lost and the situation irreversible.

Figure 8 & 9: Speculative projects lead to eccentric and strange concepts of recuperation and restoration that violate any acceptable concept of historical heritage.
level of 95% of their monthly income. This represents total dependence on the future fluctuations of the Central European Bank and the easy imaginable disastrous consequences.

The many credit possibilities also enabled the permanent cult of the car as a ‘sacred cow’ on which Portugal appears to be totally dependent. To give an idea of the true invasion by private cars that Lisbon suffers everyday, it is enough to reflect on the fact that the AML (Metropolitan Area Lisbon) transports around 33,3% of the total national work force, since the majority of the places of work (54,6%) are situated in the city of Lisbon.

In 1991 the numbers indicated a total of 600,000 jobs within Lisbon, 68% of these being in the central area of the city\(^2\). According to the census carried out by the city hall of Lisbon in 1992, this gives us an image of a city invaded each day by several of thousand cars (250,000 each day, in addition to the 400,000 that are already present in the city). This duplicates the population during the day (from 660,000 to 1,400,000) and also multiplies the internal trips in individual transportation\(^3\).

Taking the opposite attitude to a country such as Ireland, Portugal has fundamentally chosen to build highways in a process of continuous ‘liberal’ investment in the individual car circulation. At the same time it has failed to develop and invest in a very urgently needed train network, thus overlooking very important environmental issues. As a result the government is now trying to compensate for the non-existence of acceptable inter-city trains by making provision for the TGV (high-speed train) in a quite eccentric way. It is easy to imagine the consequences at the levels of air pollution and of continuous physical and psychological stress and exhaustion that these constant traffic ‘jams’ provoke (aside from the very positive developments in the subway network which has enlarged its network with efficiency). The average speed of the buses in Lisbon is about 15 km/hour. Sometimes a single illegal parker can cause a jam of 15 tramways, which may even last up to an hour.

**Second act: a bridge too far**

On the tragic evening of one of the first days of March 2001 a bridge in the north of Portugal collapsed, in its fall dragging down one bus and three cars. The collapse of the bridge was caused by technical neglect over years without any maintenance and by the criminal exploitation of the extraction of river sand. In combination with extremely bad weather, this affected the foundation of the pillars that supported the bridge. The number of 70 deaths brutally startled the country and obliged it to face the real situation in its interior. In other words, this accident has revealed and denounced the real situation of Portugal with an abandoned interior, decadent infrastructures and deserted villages sometimes rescued by Dutch and German newcomers.
This disaster became a symbolic ‘turning point’, a symbol of a deep dichotomy between a ‘facade development ’at the price of astronomical expenses and costs, totally focussed on the coast area, and very real underdevelopment of the rest of the country with its abandoned and forgotten interior.

This tragic event makes us stop and reflect on the future and on the role of Portugal in the United Europe of the Post- Nice to include Eastern Europe. Portugal will be able to make use of the III Common Packet, which guarantees structural credit facilities from the European funds until 2006. After that Portugal will have to prove that besides taking the attitude of a well-behaved pupil, it will be able to make use of the opportunities offered – the time and the money – in a dialectical way to formulate a true national project at conceptual and strategic levels. This progressive desertion of the inland areas began in the late fifties and has extended into the sixties by the continuous emigration of Portuguese people to countries like France and Germany, who were looking forward to opportunities of a better life. This has led to a the formation of a cultural ‘no-mans land’ created by the first generation who directed themselves to the systematic destruction of the vernacular and traditional architecture of the different regions all over central and northern Portugal.

The next generation saw their traditionally built parental homes, representing centuries of vernacular accumulated wisdom, as symbols of misery. They were demolished and replaced by hybrid ‘pavilions ’, vulgar symbols of philistine kitsch.
Figure 12 & 13: The restoration of the historical areas takes place far too slowly. Every year 20 buildings collapse.
and provincial ‘nouveau riche’. In this way, the paradigmatic references of centuries of culture have been destroyed. What has been lost is the indispensable archetype for the survival of the cultural specific in an increasingly global society and a speculative, increasingly materialistic world. Thus the source of identity, which is the only value able to guarantee a specific national project in an inter-governmental Europe of nations and that is able to mark and distinguish the Portuguese specific characteristics in an Iberian context is lost. When a country loses its cultural heritage, it loses its identity and, in this sense, Portugal can be considered as a strongly menaced country.

The government is planning to spend 160 million ‘contos’ (800 million Euro) of the III Common Packet on projects of qualification and requalification in 18 cities spread throughout the country in a global and integrated program called ‘Polis’.

The main objective of this text is to direct the attention to the city of Lisbon. It even has the pretension to defend the idea that in a ‘Post Nice’ period, all the available energy, cultural will and financial visions and strategies should be directed towards the global restoration of an enormous, still historically unified area in the historical centre of Lisbon. This will bring together all the fundamental themes for the future: housing, daily quality of life, community, heritage, identity, environmental quality and contribution for the ecological survival of the planet.

**Third act: a decisive victory**

In the first days of January 2001, the mayor of Lisbon ordered the immediate expulsion by the borough police of the tenants of a building situated in the protected area of the historical centre of Lisbon. This area called the ‘Baixa Pombalina’, was classified in 1978 as an urban ensemble under the eccentric nomination of ‘imóvel de interesse público’ which means ‘building of public interest’. The eccentricity of classifying a huge urban area, coherently unified in its construction and typology, which spreads over 235.260 m² and gives shape to 62 urban blocks, as a ‘building’ of public interest is due to a typical failure of the Portuguese legislation on heritage to recognise the phenomenon of the ‘urban ensemble’. The idea of the mayor was to demolish the building immediately. Only the heavy criticism and opposition emerging from public opinion, aided by the alerted media and provoked by the newspapers, prevented the immediate demolition. The ‘building’ was part of the protected area which was forced by law to submit to the judgement of the ‘Instituto Português do Património Arquitectónico e Arqueológico (IPPAAR), the national heritage institute.
Figure 14 & 15: The last hope of a turning point. A global restoration of the 18th century urban area, the Baixa, must take place, giving this high quality residential area back to the inhabitants of Lisbon.
In Portugal the heritage questions are dealt with by two institutions. The first is the DGEM (Direcção Geral dos Edifícios e Monumentos Nacionais), a much older institution still dating from the typical late 19th century processes of growing awareness of the need for heritage conservation and preservation and responsible for the ‘classic’ restorations of the great national monuments. The second institute, the IPPAAR, is a much more recent institution founded after the revolution of 25 April 1974 and much more sensitive to the fluctuations of the political governmental nominations.

But what were the intentions of the mayor in taking the risk of developing such a polemical attitude in a protected area? The building concerned was destined to be replaced by the base of a vertical structure of concrete and steel, reaching 80 metres high, which was to house a lift and to support a platform bridge with a length of 190 metres. This enormous bridge was supposed to connect the ‘Baixa’ to the ‘Acropolis’ of Lisbon, crowned by the castle of St. Jorge, and, if constructed, it would dominate the town view as seen from every possible angle.

The ‘Baixa Pombalina’, which has already been described, constitutes a remarkable urban unity and, as a matter of fact, is one of the most important urban monuments in Europe, illustrating the Enlightenment, it was conceived as a reaction against the great earthquake of 1755, which almost entirely destroyed Lisbon. The whole area was planned and projected as a new town, which it took one century to complete. Considering the systematic destruction which has taken place and is still going on in the 19th century areas and ‘boulevards’ and considering the wild growth of the nightmarish suburban areas, the ‘Baixa Pombalina’ really has become a symbol of resistance; a last fortress resisting the destruction of heritage, but unfortunately losing its original main function: housing.

But let us treat this subject as the last chapter of this text.

The mayor, after a public discussion in the National Institute of Architects (Ordem dos Arquitectos), and after another in the Institute of Engineers (Ordem dos Engenheiros), was defeated by a massive opposition and was forced to reconsider and finally to give up the project. This episode illustrates a very important victory for public opinion and the increasingly critical attitude of many professionals, who were and have for a long time remained prisoners of a concept of modernity, only able to affirm themselves by an attitude of rupture and contrast.

It is indeed a fact that since 1983 (the year in which several interventions in monuments took place), the principles of the Charter of Venice have been used in restorations, with ‘creative’ approaches in ‘contrast’, thus destroying the unity of monuments and illustrating the need for the artistic and personal affirmation of the architects.
Undoubtedly the great exception has been the integral and literal reconstruction, carried out without any hesitation, of the exterior of the several buildings in the Chiado, which were destroyed by the great fire of 25 August 1988.

Since 1988 an effort to organise strategies for the restoration and conservation of the historical quarters has been made. The first experiences in which the concepts of monuments, ensembles and places seen as global architectural heritage took place in Portugal in the 70s and were those of the quarter of Barredo in Porto and of the historical centre of Guimarães. These experiences were continued in Lisbon in the quarters Alfama and Mouraria. On the 23rd of January 1991 the Convention of Granada was officially accepted and the main organisation for the conservation of the historical quarters DMRV (Direção Municipal de Recuperação Urbana) follows the principles of the Charter of Historical Cities (Icomos, 1987).

Today several restoration offices are to be found in different historical quarters and the intervention area is defined by a territorial area of 3,700,671 m², including 6,446 buildings, which are mostly in a bad state of conservation. This represents 23,555 residences for 57,550 individuals, consisting of an old population that over recent decades has been tending to diminish. This population comprises people with low educational levels who work in jobs requiring few qualifications and who have weak economic resources.

Nevertheless the conservation process has been slow and difficult. The two areas that have the highest number of (2,858) of recovered residences are those of Bica and the Bairro Alto. In 12 years 8,000 residences have been recovered and between 25 and 30 million ‘contos’ (125 and 150 million Euro) have been spent. The estimated budget for the coming years is 5 million ‘contos’ (25 million Euro) a year.

Even the official responsible for the recuperation-conservation of the historical quarters has lately confirmed that the first buildings that were recovered are already again in need of restoration. There are 6,000 buildings in a bad condition and the average number of buildings that collapse is 20 a year. In view of the enormous contrast between the percentage and amount of new buildings which have been built and the very low investment in the conservation and restoration of old buildings, with the aid of the IGAPHE (Instituto de Gestão e Alvenaria do Património Habitacional do Estado), the government has at last begun to develop supporting programs and ways to finance the recuperation. By acting in collaboration, programs like ‘Recria’ (already existing for 12 years), ‘Rehabita’, ‘Recriph’ and ‘Solarh’ try to cover different areas of the city. However the results make slow progress and are still not very spectacular. Besides this, nowadays it is practically impossible for a young couple to start their lives together by renting a house. This forces them to invest money in buying a house instead of renting; money that in many cases is not available, so they have to borrow, thus entering in the negative spiral by incurring
debts, as already described above. Facing this situation, the ‘Secretaria de Estado da Habitação’ (Parliamentary Under-Secretary for Housing) has developed a programme to stimulate the renting of houses by giving rent subsidies to the tenants, reduction of fiscal charges for the owners and actualisation of rent.

One of the most important measures to stimulate action or to punish neglect is directed towards the owners of empty buildings. Empty buildings can often be seen in a terrible state of decay. In many cases this is caused by the owners who leave the windows open on purpose and who destroy parts of the roof to increase the degree of deterioration and destruction. All over the old and 19th century areas you can find cases of pure criminal speculation based on the value of land; this has even happened with various buildings in one of the main streets of 19th century Lisbon: the ‘Avenida de Liberdade’.

Quo Vadis?
The main objective in the composition of these three acts was to describe the paradox and ambiguous context that characterises the present situation in Portugal. A situation in which the challenges of the enlargement of the European Union and the end of the guarantee of the structural continuous flood of European money create the need to make choices, to establish priorities and to define Portugal’s own projects, even more urgent.

Following this introduction it is now time to formulate the final theme of this article; a theme that could develop into a project that could reveal itself as the symbol of a new ‘Post – Nice’ period in Portugal. A ‘grand’ project for the city of Lisbon, capable of synthesising all the great themes into one project for a truly futuristic development. This would incorporate preserving the environment, the quality of life, the urban requalification, the heritage preservation and restoration, the solutions for the housing problems, the development of strategies for collaboration between private initiatives and governmental authorities and of financial strategies.

As already mentioned, the historical centre of Lisbon largely covers a huge area called the ‘Baixa Pombalina’. This was a truly new city created as a global urban plan of reconstruction after the great earthquake of 1755, designed by the first minister of the kingdom Sebastio José de Carvalho e Melo (Marquis de Pombal) and planned and executed by his team of military engineers of the ‘Casa do Risco’. The new city arose like a true phoenix from the dust of the ruins and from the ashes, forming one of the most perfect and important examples of the enlightened urban ideals. As a composition in a concept of space it was still within the tradition of the Baroque, but already reduced and ‘integrated’ by the rational, reductive and disciplined analysis of the Cartesian ‘grid’. This grid also brings discipline to the natural accidents of Lisbon, spreads through the hills imposing abstract urban lines.
Figure 16: The addition of the 'gaiola' structure to the world heritage list is of fundamental importance to the protection of the complete integrity of the Pombalino buildings.

Figure 17: 'Restoration' in this area tends to destroy the interiors (high quality historical interiors with residential potential) together with the 'gaiola', merely leaving the facade and creating an illusion.
on Lisbon’s topography. The city was not only conceived ‘in abstract’ in relation to its urban lines, but has also been ‘fulfilled’ in concrete terms by a reduced language of the architectural typology conceived by military engineers who created a new architectural style. This was a synthesis, between vernacular traditions, scholarship taken from the late Baroque and neo-classical ‘avant garde’.

In this way a new city was created and shaped, in which method and necessity have functionalised and standardised the production methods directed to the creation of an unique style. Here three subtle variations determined by the hierarchical importance of the main and secondary streets developed a dialogue between main axes and secondary perpendiculars in the urban project. This created a functional city that never became functionalistic, in which the demands and impositions of the epoch towards architectural quality and erudition, guaranteed a high quality of composition in space (squares and spatial perspectives) and of materials and a natural hierarchy between public and private buildings. The team of military engineers also invented and created a new structural anti-earthquake sustaining skeleton for the buildings; a truly flexible construction which probably constitutes an important element of world heritage, but which certainly represents one of the most important aspects of the ‘Pombalino’ architectural style and global project.

The entire area was completed during the 19th century and enriched by the cosmopolitan way of life of the century, which filled up the area with a very important number of shops in the French flavour of the ‘Boulevard’ culture. Many of these shops survived, most of them maintaining their very important unity between interior and exterior, but their survival is increasingly threatened by the habits of consumption developed and stimulated by the new huge shopping centres.

This entire area is intensively used everyday by the services concentrated in it (banks, insurance companies, offices representing different commercial activities) and constitutes a true city, invaded during the day by a lot of highly concentrated, chaotic and polluting traffic streams. All these activities, which characterise the ‘Baixa’ during the day, collapse and disappear at night, simply because its true original function, housing, has been lost. This area was built as a residential area and in our day all the interiors the above-mentioned services and companies use (some of them remarkable) or left empty and deserted by owners with speculative attitudes.

The whole area is classified and under the protection of the law, but no systematic, unifying and complete study of its architectural richness and residential potential exists. Each time that a so-called ‘recuperation’ is carried out by order of a firm, a bank or any big shop, all the original parts are simply demolished, together with the wooden sustaining structure, the ‘skeleton’ called ‘gaiola’ (cage), leaving only the facade as an illusion of ‘conservation’ of heritage. This is also precisely what is
**Figure 18:** The victory in the battle between public opinion and the 'lift of the castle' was decisive and fundamental in a symbolical perspective for the future of heritage in Lisbon.

**Figure 19:** New 'threats' on the horizon. A group of people representing financial interests is pushing for the building of a 'Manhattan' on the other side of the river Tagus, facing the 18th century area, just in front of the Place Royale (Praça do Comércio).
happening in all the 19th century areas of the city, with the difference that these areas have been practically lost, while the 18th century area of the ‘Baixa’ is still intact and present in its own unity.

Considering all this I propose:
- A global and systematic study (building by building) of the historical heritage and architectural richness of the interiors and of the residential potential of the ‘Baixa’;
- The definition and establishment of rigorous criteria of intervention and restoration based upon the archetypal-historical characteristics of the ‘Pombalino’ style, seen as a global and indivisible unity between the interior and the exterior including of course, the 19th century interventions, which sometimes are of great quality, both in their interiors and exteriors;
- The development of financial organisational strategies for the formulation of a symbiosis in the collaboration between private initiative and municipal government, with the objective of guaranteeing a financial ‘revolving fund’ that at its turn would be able to guarantee a continuous and constant dynamic of intervention in opposition to the actual situation in the historical quarters, where the conservation and restoration works are being carried out in a slow rhythm.

The proposition that now lies in front of you is that by transforming it again into the place to live and work ‘par excellence’, the future global restoration of the ‘Baixa Pombalina’, with its rich interiors, becomes the symbol of a turning-point and of a new type of ‘grands travaux’ of a Post-Nice period in Portugal.

A period in a country finally ‘found again’; embodied in a new attitude to true development. This will be sustained development, in which money will be responsibly employed to achieve human and social progress in which money will be employed to safeguard an irreplaceable heritage that, with its specific characteristics, guarantees diversity within the unity of Europe.

This project would no longer be of temporal megalomania, which is misplaced from the true challenges of the country, serving obscure objectives and devouring European funds.

Sources
2. Luisa Schmidt, Consumo ambiental em Lisboa, uma dicotomia, p. 170
3. Luisa Schmidt, Consumo ambiental em Lisboa, uma dicotomia, p. 172
"Do not let us deceive ourselves...; it is impossible, as impossible as to raise the dead, to restore anything that has ever been great or beautiful in architecture. ... Do not let us talk then of restoration. The thing is a Lie from beginning to end."

*John Ruskin, The Lamp of Memory*

The Bishop’s Palace in Sens, illustrated before and after restoration by Viollet-le-Duc in 1851, may stand as an example of what Ruskin had in mind when he delivered his well-known homily against Restoration. It demonstrates the re-creation of a monument in the shape it may once have had - or, rather, *should* have had according to the judgement of the restorer (Figure 1 and 2).

However we should remind ourselves that *Restoration*, as used by Ruskin, roughly corresponds to our modern term *Reconstruction* - a term which includes the re-erection of edifices that have suffered extensive damage or complete destruction.

Ruskin died in 1900 and thus did not live to see the *Crollo di San Marco*, the collapse of the Campanile in Venice in 1902. What would he have said to the problem created by that awful misfortune? I suspect that even he might have concurred with the immediate decision by the city councillors to rebuild it *com’era, dov’era* - how it was and where it was (Figure 3).

Most practical interventions by conservators (most restorations) contain an element of reconstruction: even the Burra Charter concedes this.... But on the other hand
there are some reconstruction projects - such as the powerful and possibly unstoppable movement to rebuild the Royal Palace in the centre of Berlin - which clearly mean to go very far in recreating a kind of alternative history.

This brings up various problematical questions such as: is it possible to draw a clear line between restoration and reconstruction? When is reconstruction permissible or perhaps even necessary, when is it not?

I would like to lay a basis for discussion by presenting various reconstruction projects carried out at different times and under quite diverse circumstances:

**Figure 1:** Bishops Palace in Sens. Illustrated by Viollet-le-Duc before restoration

**Figure 2:** Bishops Palace in Sens. Illustrated by Viollet-le-Duc after restoration
The Arch of Titus in Rome, which adorns the programme for this symposium, is my earliest example. Integrated into a mediaeval fortification, this ancient Roman triumphal arch was greatly reduced both in fabric and in visual impact (Figure 4). As early as 1824, on the basis of close research into the authentic remnants of monument, it was transformed into a re-creation of its former splendour. On balance, I think we will concede that this was a successful project: on the positive side I would say that we have retrieved a monument, which had been partially lost. More than half the present fabric may be new, but the materials and craftsmanship of the new parts can be clearly distinguished, which cannot be commended too highly. On the negative side, of course it was inevitable that the mediaeval situation, in which the arch was part of a fortification - was obliterated. Moreover it is regrettable that parts of the authentic building (such as a chamber over the arch) were not recognised and were therefore destroyed during the reconstruction process.

Another highly significant and influential restoration was that carried out on the collapsed Temple of the Dioscures at Agrigento in 1836-45. The north-western corner of the temple was re-erected to its full height - a partial reconstruction which provides visitors with an image of the original architecture thus offering significant help towards understanding and appreciating what would otherwise be merely a tumbled ruin (Figure 5). However, although this treatment has doubtless helped to preserve the place and has assisted people in evaluating its cultural significance, it was a creative act rather than an act of conservation or restoration. In this example, an artificial ruin has been created which is much more compelling and picturesque than the heap of stones that was produced by the forces of time and nature: an ideal ruin in the tradition of those employed in 18th-century landscape gardening. In the minds of millions of tourists this type of enhanced ruin has produced exaggerated expectations of the visual qualities of ruined sites - expectations which ancient monuments sometimes find it hard to live up to.

The two prime motives for archaeological reconstruction have been the preparation and enhancement of the site of the ruins for tourism on the one hand and gaining detailed knowledge about a ruined place. Some of this archaeological reconstruction has gone very far in transforming a site, giving it an entirely new character.

The Monument of Memmius at Ephesos - re-erected or rather re-interpreted in 1961/62 - may perhaps be considered to be on a par with the Agrigento example in the sense that it shows a creative, artistic approach to the situation (Figure 6). But, unlike the 19th-century example, it is not an ideal ruin working with the idea of pleasing decay, but a rather shrill, deliberately disharmonic assemblage of authentic parts, no doubt influenced by tendencies in the contemporary philosophy of the time. Turning the old into something new, in the sense of re-creating a concept, is
not a bad idea in itself; indeed it may open the eyes of the visitors and encourage them to look at the ancient ruins in new and different ways. But in this case the work was undoubtedly executed at the expense of the original, since all the marble parts and fragments are now assembled with considerable amounts of concrete plus steel reinforcements and can never be dismantled.

A much sounder and academically precise project, also at Ephesos, is the facade of the Library of Celsus, reconstructed between 1970 and 1978. This splendid facade is now much more impressive than it was as merely a more or less ordered heap of rubble (Figure 7). However, on the site of a completely ruined city - a site of predominantly horizontal lines and shapes - it has created a disturbingly vertical element that tends to diminish the significance and appreciation of the unreconstructed surroundings. To soften the impact of the compelling and dominant new structure it was found necessary to reconstruct more buildings adjoining it, but the problem remains. The reconstructed building - although in many ways less authentic - arrogates to itself a leading position in relation to any untouched and weathered ruins in its vicinity.

This has also been the experience at Xanten on the Lower Rhine, where the remains of a Roman city have been restored and developed to recreate a colourful image of how it might have been in Roman times (Figure 8). The site shows authentic ruins, but also full-blown reconstruction with materials such as wood and plaster, as well as painted surfaces, only very sparse authentic remains of which have actually survived.
into the present. There is a remarkable partial reconstruction of a temple reminiscent of the Temple of the Dioscures in Agrigento, which is also a cleverly disguised protective building for the original temple remains housed inside (Figure 9).

The Xanten site is intended to provide a well researched and presented didactic display, but there seems to be no way of avoiding the great danger of misinterpretation by the public. They perceive the reconstructed buildings as being more authentic than the actual untouched ruins next to them, because in comparison the latter are decrepit, ugly and boring.

There are many more modern ruins and monuments that have been the focus of far-reaching restoration projects. In the late 19th century the Castle of Heidelberg was the subject of a long and intense discussion between German art historians and architects about the essentials of principles of restoration. This discussion, which became very incensed, was ignited by Karl Schäfer’s thorough restoration of the
Friedrichsbau, one of the main elements of the extensive castle precinct. Perhaps typically, the motivation for the restoration project was the wish to finally erase the shame of the destruction of the castle by the French 200 years earlier. Schäfer’s approach, if continued, would have produced a completed castle of largely new fabric and new surfaces. He would have had no problems in inventing ‘historic’ buildings and elements to fill any voids - as witness his ideas for the Ottheinrichsbau, the next part of the castle that he intended to restore (Figures 10 and 11). The project was stopped by the outcry it generated; the discussion which followed became historic because it laid down principles akin to those postulated by Ruskin and Morris and stressed the value of authenticity of fabric and surfaces. Georg Dehio, one of the protagonists, concentrated its results in his dictum of konservieren, nicht restaurieren, which in modern usage would read restaurieren, nicht rekonstruieren: ‘Restore, but do not reconstruct’.

Figure 9: Temple of the Dioscures in Agrigento
Figure 10 & 11: Ottheinrichsbau restoration-proposition by Karl Schäfer
Nevertheless, the destruction wrought in the two World Wars brought a dire need for reconstruction - mainly of castles, churches and other prominent historic buildings, many of which were reinstated in a way which did not give any indication of the devastation they had been through.

In contrast to this widespread approach, in his restoration of the Alte Pinakothek in Munich in the 1950s, the architect Hans Döllgast demonstrated a way of integrating the scars of war into the building, rather than obliterating the memories of suffering and violence. A large bomb had hit the long and narrow museum building erected by Klenze in the 1840s, as if by an axe, opening a breach its middle section. Döllgast filled the gap with an abstract version of the original structure in which he reduced both the quality of the material (rough brick instead of dressed sandstone) and the treatment of the surfaces, omitting any decorative detail (Figures 12 and 13). Closing the wound, but conserving the memory of the destruction and of its cause, symbolized respect for the building and its history. Döllgast’s approach was carried out against some resistance from those who advocated a conventional restoration of the building to its original state: an idea that has recurred several times since.
A more recent example of the restoration or revitalization of a war ruin is provided by Schloss Gottesau in Karlsruhe, which was planned and carried out in the 1980s. The gutted shell of the castle had been sitting around more or less untouched until the idea came up that it could be transformed into a music academy. The main problem was that in its long history it had undergone several transformations (Figure 14). It had started life in the 16th century with three floors, one of which it lost in the 18th century; by around 1900 it had become part of a military compound and turned into a barracks, which entailed further structural changes. The comparatively relaxed approach of the restoration project recreated the three-storied original volume, but made no attempt to hide the fact that the building had gone through difficult times. However, the elegantly designed new steel elements - the window frames, for instance, or the interior structures - do not speak of suffering, as does Döllgast’s architecture, but rather of the beginning of a new and forward-looking chapter in the history of the building.

The latest expression in the field of restoring World War II ruins is the project of the Marienkirche in Müncheberg (Figures 15 and 16). This building - a mediaeval church with additions and changes by Schinkel - was gutted by fire during the final advance of the Red Army towards Berlin in April 1945 and left as a ruin until 1990. Reunification brought new strength to the hopes of restoring it, just as in many other East German towns where many ruins, particularly churches, were awaiting events. Again, the restoration concept that was finally carried out deals with the fact of the destruction not by obliterating its traces, but by weaving it into the new scheme. The
Figure 15 & 16: Marienkirche in Müncheberg

restored building, which nowadays would have been too large for exclusive use as a place of worship, is partially reused to house a public library: a separate construction that is set into the church in a sensitive combination of old and new. The historic structure and surfaces tell the story of war damage and subsequent
Figure 17, 18 & 19: Frauenkirche in Dresden

decay, the new structure symbolizes new life growing out of the ashes, accepting both the damage and its cause as part of the history and the cultural significance of the place.

This is not the approach and understanding favoured in Dresden, where the restoration of several prominent ruins left over from the war has recently been completed or is still in progress. The Frauenkirche, of course, is a highly symbolic and emotionally charged place. Its collapsed ruin had been left untouched until 1990, as a memorial that, in the opinion of many, acquired a new cultural significance precisely because of its ruined state (Figure 17). However, many others had never given up the hope of restoring it to its former glory. The project which is being carried out and which is well advanced is claimed to be an ‘archaeological reconstruction’. Since 1990, people have sifted through the heap of rubble and debris, analyzing and storing many tons of stones and parts with the announced intention to employ these materials for what would amount to an anastylosis. Re-using as much as possible of the materials from the rubble heap is perceived as a way to achieve not just a visual or formal recreation of the lost building, but much more than that: a full renaissance of the authentic baroque monument, breathing the spirit of its creator, the fabled George Bähr.

Naturally this concept has provoked much discussion and strife between its advocates and those who entertain doubts as to its validity, but Dresden is a place which has suffered much. This suffering was not only confined to the night of the fire-bombing in February 1945, but also extended to the second destruction which the city suffe-
Figure 20: Sgraffito decoration in the Royal Palace in Dresden

Figure 21: Royal Palace in Dresden

red through the ham-fisted rebuilding schemes of the Socialist era. Although one may have to accept that in Dresden there is a powerful emotional need for this kind of restoration, one cannot help noticing that the reality of the work which is actually being carried out falls far behind the claims of the protagonists. The building which is rising is certainly no anastylosis, but a new structure, highlighted here and there by the inclusion of a few blackened stones, some of which are old and some of which are merely painted to look old and historic (Figures 18 and 19).

The reconstruction of the Frauenkirche is legitimate enough in itself, and may perhaps have been even even more so without this element of self-delusion which makes people believe that what they are getting is the original.

Whereas the Frauenkirche project is clearly to be classified as a reconstruction, since by far the largest part of the building will be new, the activities centring on the war ruins of the Royal Palace at Dresden are dealing with a situation in which a far greater proportion of historic fabric has survived. Another significant difference between the two large sites lies in the fact that the church was basically designed by one man - George Bähr - whereas the castle has a long and convoluted history during which parts were changed, added, partially destroyed or redecorated internally and externally. This situation has tempted those who are responsible for the project to view the past of the monument as a supermarket full of choices, from which they have picked those phases and architectural elements that they find most attractive. This has led to the reconstruction of spaces and facades which were destroyed as early as the 17th century, whilst some parts which have survived the war but are not deemed worthy of integration into the new and edited version are being pulled down. An instance of the former approach is the design of the facades in the courtyard - sporting black and white sgraffito decoration (Figure 20). Something like this must have existed in the 16th century, but had been entirely lost by 1700, its only surviving documentation being prints on the scale of postage stamps. Therefore the monumental figures that are admired by the public today are undoubtedly a very learned and impressive, but nonetheless highly speculative rendering of what might have been there once. Another example is the space that once housed the chapel: an engraving is all that there is to show what it once looked like, but this is accepted as sufficient evidence for the implementation of a full scale reconstruction as soon as sufficient funds can be found (Figure 21). On the other hand recent years much of the latest building phase of the castle, designed and executed around 1900, has been demolished in to make room for various fanciful new parts. This is a concept that seems to follow the principle that the most successful episodes in Saxon history are to be represented in the splendidly rearranged palace complex.

Perhaps one might compare and contrast this example with the restoration and partial reconstruction of Lodge Park, a project in which the National Trust returned a small
country house to its original appearance by eliminating many of the traces of its more recent history of use and changes (Figure 22). The justification for this project was that the building, originally erected as a hunting lodge in the 17th century, was so unusual in its type, function, form and setting and that the cultural significance of the place lay much more in the original situation than in the changes it had undergone in later times. These changes had reduced it, at least internally, to a very boring and nondescript piece of Edwardian domestic architecture. Indeed, there did seem to be sufficient archaeological and pictorial evidence to recreate a reliable version of the original interiors and structures. In abstract terms, this is the same argument as that used for the approach at the Royal Palace in Dresden, although there is one significant difference. There is a distinct political component in the rewriting of history as demonstrated in Dresden, whereas the English example is clearly motivated by the wish to do what is best for a valuable and unique historic building. It is considered better to bring out its qualities, even though this means the removal of existing elements judged to be of inferior relevance (Figure 23).

Another National Trust house, Uppark, may provide a comparison with the situation Dresden (Figure 24). This house fell victim to a disastrous fire which broke out during repairs to the roof and which could not be brought under control until it had gutted the entire building. Roof and ceilings collapsed; on the morning after the fire, the shell of the house was filled with what was described as 'several metres deep of steaming black porridge' - an emulsion of scorched debris and the water pumped in by the firemen. No doubt the scene of destruction must have closely resembled the
situation of a building such as the Royal Palace of Dresden, which was destroyed by fire bombing in February 1945. However, there was one decisive difference: immediate action not only salvaged most of the movable elements of the interior, such as furniture, paintings, and books; even more significantly the immediate search-and-rescue operation amongst the debris brought to light many fragments of stucco and carved wood and even textiles. Various alternative designs were discussed - one alternative was to rebuild the interior in a modern way - but the decision taken was to rebuild the house in the shape about which the most was known: the shape it had on the day before the fire. One factor in this decision was the fact that insurance money was available - but solely for reinstatement, not for demolishing the house or for rebuilding it in a different way.

Through painstaking and immensely detailed work over several years, the interiors of Uppark’s main rooms were indeed reinstated. Uppark has achieved what the Frauenkirche at Dresden only claims to do: fragments of the authentic building were put back into their original position and provided the exact scale, form, material and craftsmanship for those additions which were needed to complete the picture (Figures 25 and 26).

Perhaps we should not talk about the concept of reconstruction without reference to at least one of the attempts to regain historic buildings which were not merely very badly damaged by some catastrophic event, but which have entirely disappeared, so that reconstruction actually means recreation out of thin air. Several examples come to mind, but the most prominent current project is probably the idea of rebuilding the Royal Palace in Berlin. This was a huge building consisting of many layers from

Figure 24: Disastrous fire in the Uppark-house
Figure 25 & 26: Reconstruction of the Uppark-house
the 16th to the 19th century - more famous for its grand baroque interiors and courtyards than for its fairly sombre exterior architecture (Figure 27). It survived World War II as a badly damaged, but salvageable ruin. However in 1950 the ruin was wantonly destroyed by the Communist regime as a political statement in an attempt to wipe out the Prussian tradition which, at that time, was denounced by the GDR as being militarist and imperialist (Figure 28). In its stead, the ‘Palace of the Republic’ was erected on part of the site - now unloved and unused, but still an historic building in its own right - and some authentic elements of the Royal Palace were inserted into the facade of the adjoining Staatsratsgebäude (Figure 29). Together with the Foreign Ministry of the GDR (which occupied the site of Schinkel’s Bauakademie), the Palace of the Republic and the Staatsratsgebäude framed the vast space used for mass rallies and signified the political centre of the GDR.

Since shortly after reunification, this Socialist urban centre has been under attack - the Foreign Ministry, as the weakest link, was soon demolished, the disembowelled Palace of the Republic is still hanging on doggedly, and only the Staatsratsgebäude seems moderately safe. Instead, people have been campaigning for the re-erection of the Royal Palace, claiming that its loss has left a void right in the hub of the city and at the end of the axis Unter den Linden, which needs to be filled by a re-creation of this vast bulk. A structure made from scaffolding covered by painted canvases of the facades provided a visualisation of the scheme in 1993 (Figure 30). It seems ironic that the scheme aims only at the reconstruction of the rather boring facades - the
more important interior is deemed to be unmanageable. Heated discussion goes on, and although virtually everybody who is anybody seems to be in favour of the reconstruction, the outcome is still uncertain. The future of the Palace of the Republic certainly looks bleak enough, but whether a replica of the baroque palace will replace it, by a modern building or just by a landscaped park remains to be seen.

After this introduction to and discussion of a variety of examples from that grey area where restoration and reconstruction touch and overlap, including examples from different times and with very diverse backgrounds, you will not be surprised if I conclude that there is no single ‘correct’ solution to the problem of how to deal with
a gravely compromised historic building. When all is said and done, whether one attempts to return an historic monument to an earlier stage, accepts the shape which it has found for itself or decides to develop it further by adding contemporary elements to the layers which it has already accumulated is primarily a moral issue.

To return to Ruskin, whom I quoted at the beginning: I have no doubt that Ruskin was right - one can never retrieve anything that has been lost. One can only go forward in time, not backward, and any action taken is an action in the present that will have to be interpreted and judged as such. In this sense it is perhaps just as interesting and informative to see that the aim of some restoration or reconstruction projects is to deny that anything has ever happened to the buildings concerned, whilst others accept the scars and changes wrought by time, and even by cataclysmic events, simply as new chapters in the continuing history of the building, even using them as a motif for further additions in contemporary architectural language.