

**Zeitschrift:** IABSE reports = Rapports AIPC = IVBH Berichte  
**Band:** 46 (1983)  
  
**Artikel:** Restoration of monuments and intervention on old buildings  
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**DOI:** <https://doi.org/10.5169/seals-35828>

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## Restoration of Monuments and Intervention on Old Buildings

Restauration de monuments et intervention sur des bâtiments anciens

Instandsetzung von Monumenten und Eingriff an alten Gebäuden

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### SUMMARY

The author proposes the division into two classes of all types of intervention on buildings. The term «restoration» and «conservative restoration» should be limited to those operations which are actually aimed at ensuring the survival and utilization of old buildings. The other more complex activities should be included and evaluated under a separate heading which may be defined as «architectural intervention on existing buildings». This would include undertakings and projects meeting major needs and more ambitious commitments.

### RESUME

L'auteur propose de classer les interventions faites sur d'anciens bâtiments en deux catégories. Les termes «restauration» et «conservation» devraient être réservés aux seules initiatives de consolidation et de réhabilitation qui assurent la remise en état et l'utilisation des bâtiments. Les autres opérations qui modifient les volumes et les pièces doivent rentrer dans le domaine créatif de l'architecture et être qualifiées de «nouvelles interventions architecturales sur les constructions existantes».

### ZUSAMMENFASSUNG

Der Autor schlägt vor, die an alten Gebäuden durchgeführten Eingriffe in zwei Kategorien einzuteilen. Die beiden Ausdrücke «Instandsetzung» und «Erhaltung» sollten ausschliesslich für die Verstärkung und Sanierung verwendet werden, welche die Instandsetzung und Ausnutzung von Gebäuden sicherstellen. Die anderen Arbeitsvorgänge sollten in einem separaten Kapitel behandelt werden, das man mit «Neue architektonische Eingriffe an bestehenden Tragwerken» betiteln könnte.



I should first of all like to express my lively appreciation of the initiative of IABSE in opening this 1983 Colloquium with a series of introductory lectures with the purpose of drawing attention to the cultural values of buildings and urban complexes and of pointing out the structural problems affecting their survival. These make a useful introduction to show how far the cultural sector has gone on an issue of unquestionably current importance for which there is a large number of answers, but not always the right ones. I, therefore, willingly accept this stimulating opportunity for presenting my subject in concise form and for bringing together its essential theoretical aspects.

So as to provide a better definition of the task assigned to me and to determine the fields and limits of restoration work, we must first of clarify the traditional terminology. To do this, the essence and meaning of the old phrase "restoration of monuments" have to be established, since the historically acquired meaning has changed considerably over time, becoming coloured by additional implications and subjected to infinite overtones.

The significance of the two words "restoration" and "monument" has, in fact, greatly broadened. The term "monument" relates to the concept of "monument historique", or historical monument, proclaimed by the French Revolution for a few representative buildings of outstanding importance which were alone declared to possess architectural values of public interest. This distinction is quite outmoded today, since it has subsequently come to be applied to less illustrious buildings and hence to all old architecture; moreover, it has been further extended to the environment in which old buildings stand to the point of embracing the so-called "environmental monument", including rural habitat and vernacular buildings. In recent years, there has also emerged new awareness, even for conservation purposes, of industrial archaeological buildings. So we see an increasingly diffuse and automatic expansion of the corresponding obligations of respect and protection. Today, these are considered equally proper even if on varying scales for all kinds of building and all examples of architecture. The term "monument" has shown itself to be unsuitable to express the broader meaning required to embrace all past activities, and has given way to other terms, being practically replaced by more colloquial and less solemn words like "architectural property" or even "architectural object".

It is a matter of fact that today we are interested in all the external and intrinsic, social and cultural aspects of old buildings, as equally valid, irrepeatable historic and formal evidence, viewing them naturally in their individual right and also in their group or urban context. This higher level of appreciation and the new demand for protection of what were formerly considered minor buildings and of all historical environment, an achievement of recent generations, are now so well established and widespread that any rule or consideration concerning architectural conservation has to take into account that it is no longer solely addressed to monumental buildings.

The new attitude has amplified both scope and responsibilities in architectural restoration, opening up unimagined horizons and leading to further interrogatives. This more ample viewpoint ties in with the programme and purpose of our Colloquium, to be interpreted as the problems of conservation at the levels of both architectural expression and structural solutions, from the simplest to the most advanced and difficult.





The word "restoration" is still frequently employed in an even more general and flexible sense with meanings ranging from simple maintenance work to complete rebuilding and substantial alterations which may give a new appearance or make for technical completion. So the brief and all-embracing term restoration is used today to signify and justify all kinds of action applied to existing buildings.

In the context of this dual interrelated extension of semantic horizons, we come to realize that the objects of such action are all worthy of consideration. They are in reality historical documents, often more significant and valuable than others, and have to be appreciated and carefully studied on a par with all other cultural property that has come down to us.

Buildings inherited from the past constitute a manifold and complex, still little known reality. They are themselves a form of information, not solely of a cultural nature, which serves various disciplines, and a source of new suggestions which we feel the need to reflect. The whole of the immense field of restoration has to be conscientiously cultivated and cannot be the privilege of restricted circles. The discussion of these themes is not the preserve of specialists alone, but has to be laid open to public discussion, both because it is a question of our common heritage and because its handling is a measure of the effective capacity of our culture and the precursor of future developments.

Given the multiplication and interrelation of factors in restoration, we should now proceed to distinguish them and to try to define various kinds of intervention, the more so as, while they all follow utilitarian ends, some are based on largely conservationist criteria and others on strictly architectural preferences and innovation. Even if a clear, precise distinction is not always possible, it must nonetheless be attempted so as to establish coherent lines of action and to overcome those deliterious misunderstandings often found today. To pursue this question better, let us see which are the main typologies of restoration of works of architecture.

Besides sporadic action, best considered as extraordinary maintenance, there are two classes or main groups of works: those essentially aimed at structural consolidation and those intended to reestablish a satisfactory appearance and to improve living conditions within the building.

Works falling in the first of these two groups, aimed at structural consolidation, acquire a specific, substantial profile, and sometimes demand very delicate action directed particularly at overcoming static disturbances developed over time or presently developing. As you know, such works consist of deepening or improving the foundations, of consolidation of walls, remaking or rectifying vaulting, ceilings, roofs or terraces.

The need for such work, which may affect only part of the building, is determined by the damage caused by mistakes in design or in building, or else by subsequent, possibly traumatic events. All this kind of intervention concerns primarily the structure of the building and therefore acts at the levels we may



consider the necessary supports of the figurative aspects of the architecture.

The other group concerns works directed at the building's rehabilitation and include various kinds of intervention, from setting the basement right to repairing the lofts. These works constitute the recovery of lost features and functions and concern in particular the elimination of damp, thermal and acoustic insulation, remaking floors, walls and ceilings, cleaning facades, etc. The installation of new plumbing and heating has to be included to ensure improved habitability for the building as a whole.

Services and equipment are being constantly developed; besides the usual ones, I would remind you of airconditioning and ventilation, anti-burglar alarms and security systems, fire prevention sensors, closed circuit television, computers, telex and so on. The introduction of special services and equipment raises new problems and calls for comprehensive projects so as to limit the amount of piping and cabling, grouping them and running them through walls of lesser interest, without omitting to allow space for other services which are sure to be wanted in the future.

While the works we have to expect to find in this group cannot all be considered suitable, they do not generally significantly affect the appearance of the building; in any case, in these and other circumstances a slight modification to the pre-existing fabric can suffice to document the work done.

On the other hand, considerable importance attaches to changes in internal spaces with a view to judicious re-arrangement, which must always conserve the disposition of the walls and respect the horizontal lay-out determined by ceilings and vaulting, without ever altering interior environmental conditions. The value of internal spaces must not be disregarded or underrated; detailed restoration is often worth while, applying specific techniques for the walls depending on how they are decorated and filling in with a neutral surface if necessary.

In effect, the whole of the second group of works concerns the appearance and habitability of the old building; all the work to be done aims at preventing the ageing of the building and at permitting a clear "reading" and more comfortable and efficient utilization.

Both classes of work are always conducted within the limits of the existing building without introducing new or discordant forms. As we have said, they meet the two substantive criteria, consolidation and usability, typical of the restoration of other important man-made works, such as paintings and sculpture.

In spite of the disparity between the subjects, the comparison fits well and responds to the same reality: the second criterion corresponds to what determines the various phases of cleaning of works of figurative art, and the problems are analogous; the removal of patina in the one case and the treatment of facades and internal surfaces in the other.

The widespread methodological uncertainty and consequent prevarication sometimes met in applying new colouring to facades are attributable to a lack of cultural links with the principles of restoration appropriate to works of figurative art, and is certainly systematically cultivated and has long been applied by art historians.





In concluding this list of types of intervention, I wish to emphasize how all the undertakings cited in the two classes considered, fall precisely within what can well be defined as the conservative restoration of buildings. In this they correspond to the conscientious practice which presides over the conservation of all other concrete testimony of human activity, not only that of works of art, but also that of ruins and of archaeological finds, of archival records made of parchment, paper or papyrus, of incunabula, rare books, and so on.

You will forgive me for raising such unusual comparisons, but they are not all that extraordinary nor are they out of place, since they all involve conservation and the enjoyment of the works of mankind. It seems to me that they are highly relevant and indeed indispensable for a correct approach to the problems concerning building restoration. Naturally, there are differences and these can be considerable due to the distinctive characteristics of architecture relative to the other arts, and therefore concern interior spaces and their vital usability.

It is on the typical distinctive features of architecture that I now intend to dwell so as to show that all those other operations concerning old buildings not yet considered which fall outside the comparative framework outlined so far. Since we cannot take the comparisons given any further, we have to recognize that there must be a clear and significant break in our brief discussion.

The utilitarian aspects of architecture naturally stimulate the on-going use of buildings under the most modern conditions of fitness for use, but they also tend to introduce different or cumbersome applications, or else an actual change in the use made of the property, necessitating more or less appreciable alterations and extensions. These needs have been felt at all times and even more so today, given the growing multiplication of projects and of new needs. When requirements acquire considerable scale and projects become more comprehensive, restoration changes its character because it tends to affect the figurative aspects of the work, especially where external volumes are increased and interior spaces are unified. Apart from conservation work and rehabilitation, actual architectural intervention takes place in just the same way as in the past when so many additions were made to pre-existing buildings to an extent and in ways which reflect the spirit of so many different cultures. These cultures confronted their past in different ways, sometimes with respect, more commonly independently and aggressively, as I have shown on other occasions. This difference in architectural intervention in itself explains the break in our discussion of restoration.

Today our sensitivity and acquired historical awareness, typical of our times, certainly no longer permit us to destroy certain things not to make unwarranted changes. But in examining the situation today, we cannot fail to be struck by the juxtaposition of new work with old, sometimes with disgust, and the many outrageous tints given to facades bring this problem and the probable emergence of certain trends home to us; they wish to seem intelligent or at least original, but will end by proving to be nothing but profane barbarism. Lastly, it is not to be forgotten that in rare instances, architectural operations in some countries can be taken to extremes, the removal of smaller historical



historic buildings from one site to another, an undertaking which is questionable and difficult to confine to extreme cases. Today, there has again come to the fore the problem of enclosing old monuments fallen into a bad state of conservation within new, transparent structures.

Leaving pessimism aside, it is certain that largely innovative intervention on old buildings will become increasingly frequent, with restructuring and extensions made to satisfy different uses. It is to be hoped that they will not be too incongruous. A broader is opened for us: that of new architectural intervention on pre-existing buildings in which the fantasy of the artist is applied to the remoulding of spaces and volumes and the highest forms of expression may be achieved, as has been found extensively in the past.

The fields of activity of so-called restoration in the architectural sector are therefore found on two different fronts and have quite distinct connotations: that of conservation and of innovation. The demarcation line between these two fronts is now quite clear and it allows us to define in different ways an entire category of intervention in which the designing architect's commitment must make itself felt. The legitimacy of new creative insertions must not be questioned, particularly in well-defined and adequately studied circumstances.

Following the arguments based on the points and comparisons that have been made, it is natural to proceed to a clarification of the scope for, and limitations to the restoration of architectural property in accordance with the present state of critical knowledge and with the solicitations of architectural culture. Now we have at last come to the point. I gladly take the opportunity offered by this Colloquium to propose the division of all types of intervention on buildings into two classes. The term "restoration", indeed "conservative restoration" should be limited to those operations which are really aimed at ensuring the better survival and utilization of old buildings. The other more complex activities should be included and evaluated under a separate ample and capacious heading which we may define as "architectural intervention for pre-existing buildings", in which would be included undertakings and projects meeting major needs and more ambitious commitments, to be critically and severely evaluated and to be controlled with the utmost care in the execution stage.

The limitation of the use of the term "restoration" to be applied solely with reference to the field of conservation, exactly as it is for other old products of human activity, would save architectural intervention for old buildings from this incongruous, even though traditional label and free it from a persistent misunderstanding which is damaging both to the buildings and to the architect's freedom of expression. This distinction is proposed here for the first time and satisfies the requirements of historical studies and logical recognition of new architectural commitment. It relieves conservative restoration from an embarrassing position of inferiority, aligning it with other established types of operation and with the theory of restoration formulated by Brandi; moreover, it endows architectural creativity with the right of choice for any further intervention. The results





should be more rigorous as well as more efficient and genuine.

The two classes of intervention for the physical reality and historical image of the building must be corrected and judged in different ways: that of conservative restoration by the yardstick of historical respect, that of architectural intervention from the determinant angle of what exists and hence with a substantial measure of aesthetic criticism and of formal compatibility.

My expert audience may object that the critical measure proposed for the division of operations into the two classes mentioned, is bound to compositional and formal assessment rather than to those subjects and requirements of a technical and constructional nature being examined in this Conference. However, it must be recognized that formal problems are not extraneous or even separable when taking any responsible overall view.

In that the participants in this Colloquium are concerned with the design and application of structural methods and techniques, they are necessarily not unaware of the incidence of the formal effects and of the architectural aspects which accompany and follow on new structural solutions. This is not solely a reference to the results of building operations, assuming that their effects are in some way induced or connected, because the interests of builders go beyond such issues and are not limited to a conservationist horizon. They are all concerned with the promotion of other ventures and with the development of all the activities of the sector which, necessarily, call for the enlargement of interior spaces and for changes to external volumes.

So as to avoid deliterious misunderstandings, it is always necessary to recall the existence and weight of other unquestionable constraints connected with such operations. Respect of these constraints makes it possible to effect the intervention, since they are the conditions inherent in the building's recognized values. The limitations to the operational horizon within which architectural design can move have therefore to be indicated, repressing any arbitrary desire to go further.

On this score, we must remember the binding existence of the Venice Charter, an international document which in general terms regulates the whole subject of architectural restoration, since that day, 31st May 1964, when I had the honour to declare it approved at the conclusion of a Congress of specialists meeting together for that express purpose on this same, splendid Isola di San Giorgio.

The close relationship, indeed the indissoluble link between any new intervention and architectural expression, imposes the need for general regulation, valid for any kind of building which I would call professional ethic for those who work in the manysided sector of building re-use. These are rules which, as such, appear categorical but must not be considered to remove all incentive, also because they can often be capable of adaptation in detail.

It has to be said at once that the innovative aspects of projects should be contained within the narrowest possible limits, and all kinds of showiness avoided. Above all, contractors responsible for the work should ensure the conservation of our building heritage; it is their duty to respect the original and toher forms which have been handed down to us as evidence of the building's histroy, always seen as individual architecture and as a determinant element in





the environment and of community life. The necessity for ensuring that any intervention has been studied in such a way that it can be reversed must be borne firmly in mind.

It is worth warning against so-called "improvement" concept which is very often introduced or invoked to justify questionable new intervention, the contents of which are rarely valid. This term, like others of the kind, expresses a natural sentiment always pursued by man, trusting in the results of his actions and at the same time tending to under-rate or even to despise the forms handed down to him from a recent past and which he unconsciously wants to alter. On the architectural and figurative planes, these sentiments therefore provoke facile impulses which, instead of the hoped-for improvements, end with the destruction of traditional features. I therefore wish to put clients, as well as those offices responsible for control, on their guard, warning them all not to agree to or accept easily the pretended improvements which however glibly presented and often well-intentioned, do not stand up to thorough criticism.

Between these two firm limitations, substantial respect for the past and a brake on alterations, the ability of the designer and director of works has to be applied to seek intelligent solutions which prove congenial or at least compatible with the building; very often such shrewd opportunities exist and have to be grasped and exploited.

The study of new but not abnormal or discordant solutions can be inspired by a potential quest for harmony, naturally without drifting into forms and expressions of stylistic imitation nor indulging too far in gratifying allusive evocations of the past.

On the contrary, a simple, frank juxtaposition of original parts and new additions must always be viewed sympathetically and suggested, in the majority of cases, as a loyal expression of constructive sincerity which nonetheless excludes daring matching and showy contrasts, which could only be appreciated for the polemical character displayed. It is also necessary to study the ancient techniques used in depth and with loving care, so as to understand their intimate suitability and to pass on to posterity, if possible, a renewed living memorial.

But I earnestly wish to suggest general, meditated employment of up-to-date methods and the newest materials. The selection of tested techniques for intervention must resolve effectively and in modern terms the problems proposed and makes for only one substantial limitation, that of not introducing unexpected problems, especially on the figurative plane. By means of the many techniques and refinement of operational instruments, everything possible must be done to try the best and most daring solutions, with light and felicitous hand, counting on the quality and evocative power of the property to be conserved, without letting oneself be excessively conditioned by the prospects of speculative exploitation.

The similitude that has been established between historic monuments and ordinary buildings from the past, undoubtedly constitutes a revaluation of the latter, so we must recognize that the design of old buildings, even where they are not terribly significant, entails greater responsibility and costs than in the past. These have to be accepted, since truly significant undertakings have to be studied and implemented on the plane of the culture of conservation.



The choice of methods and techniques for an intervention must therefore be carefully pondered and for this all useful contributions by competent persons should be accepted; practical discussions and theoretical proposals should not be despised. Also it will not be forgotten that all possible financial assistance should be sought so as to involve directly and indirectly public and private bodies in the responsibility for the undertaking, the preparation of the project and the painstaking execution of the work. The commitment in fact goes beyond the interest of the individual and rises to social and cultural levels.

We said at the start that we would show what the situation is regarding the problems connected with the restoration of buildings; we believe that this has been done, even if in general terms and without reference to concrete examples, and we are conscious of having also looked towards the future, making some considered forecasts. I do not know whether the sub-division proposed will enter into current acceptance and practice given the natural slowness to be expected for its reception. But apart from terminology which is of lesser interest, we are convinced that we have contributed towards clarification of the underlying problems so that definitions for the activities of the sector as a whole can be determined.

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