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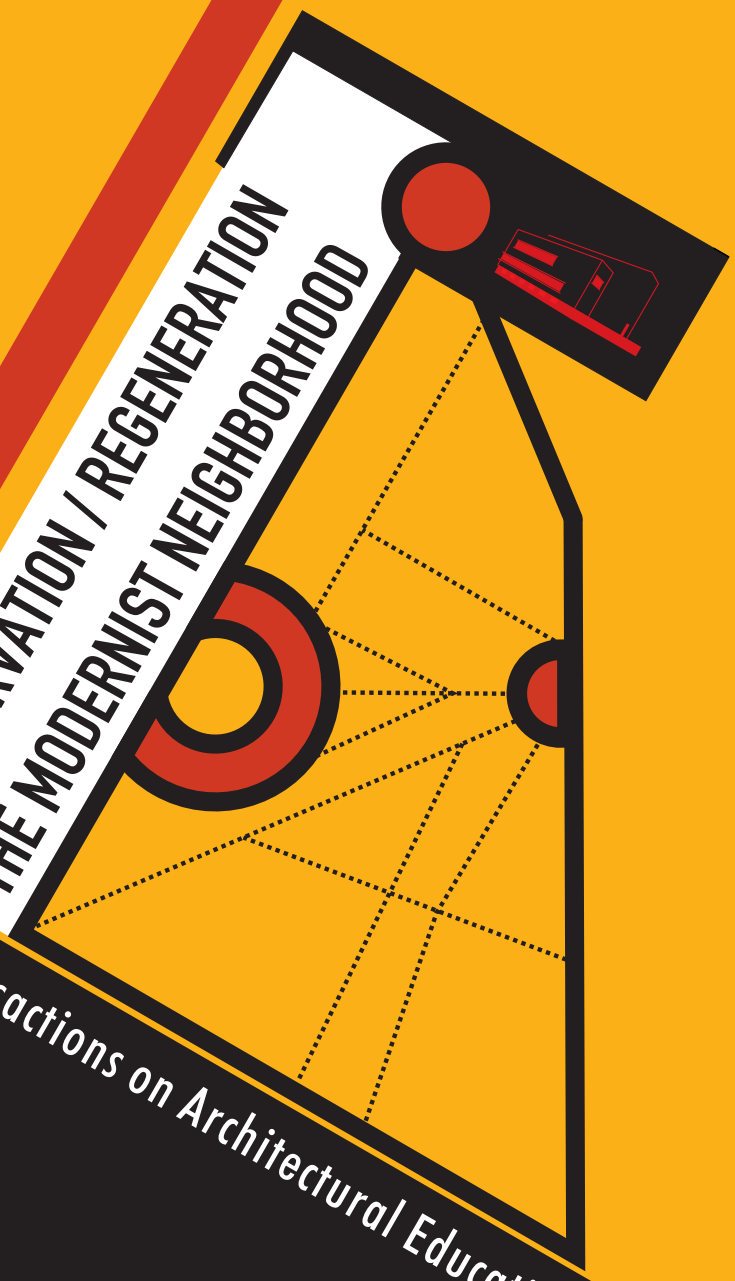
CONSERVATION / REGENERATION THE MODERNIST NEIGHBORHOOD



EAAE Transactions on Architectural Education

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CONSERVATION/REGENERATION:
The Modernist Neighbourhood

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EAAE - European Association for Architectural Education

ENHSA-European Network of Heads of Schools of Architecture

This project has been funded with the support of the European Commission. This publication reflects only the authors' views, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

EAAE Transactions on architectural education no. 58

Editors:
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Graphic design:
Andra Panait

Published by EAAE - Kastel van Arenberg 1, B 3001 - Leuven, Belgique - 2012

ISBN: 978-2-930301-57-0

Printed in Romania – Smart Print, Bucharest – March 2013

Organising Institutions

Hosting Institution:
Ion Mincu University of Architecture and Urban Planning, Bucharest, Romania

Co-organising Institution:
University of Genoa, Italy
School of Specialization in Architectural Heritage and Landscape
DSA-Department of Sciences for Architecture

This book presents the papers written by 47 participants after the 3rd Workshop organized by the Conservation Network of the European Association for Architectural Education in 2011 in Romania.
The workshop was attended by 51 participants from 22 universities, representing 8 countries: Belgium, France, Ireland, Italy, Netherlands, Portugal, Romania and Turkey.

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Illustrations to the text were provided by the authors, organizers and editors.

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New ‘openings’ on the district: the role of frames in the perception of the façade

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The process of urban ‘regeneration’ that is occurring in the large block situated between Aviatorilor Boulevard, Calea Dorobanților and Iancu de Hunedoara Boulevard forces us to reflect seriously on the concept of ‘urban preservation’, an issue which was raised on several occasions during the workshop. The meaning given to the term ‘preservation’, its application to specific types of buildings and to some architectural and decorative details may lead us to partial approaches, both to projects and to their implementation. In an environment where ‘preservation’ means safeguarding physical matter and, through this, the immaterial values handed down to posterity, the extension of the term from its application to a single building to the larger urban scale cannot alter the term’s basic theoretical foundations[1].

‘Urban preservation’ cannot therefore renounce safeguarding single buildings, including their decorative and architectural finish as well as the fixtures and fittings, which form integral parts of the building transformations that occurred in the last century. In this situation the question therefore arises of establishing the relationship between the preliminary phase of investigation into the district and its single buildings, a programme of periodical maintenance and a project of preservation, where this is necessary.

A preliminary process of investigation and initial study takes on yet greater importance in dealing with a case study as complex as this: where the dimensions of the district, the variety of different types of buildings, and the complexity of the urban dynamics involved will all play determining roles in safeguarding the object of our study. The impressively varied nature of the buildings in the district has been a characteristic since their construction; this variability is matched by the equally varied range of inhabitants, both in terms of income and lifestyles. This 'dyscrasia' is still very evident and is tending to repeat itself on a new note where the largest and most elaborate buildings are now being taken over by a wealthy middle class, while houses originally intended for the working class are being taken over and slowly restored to accommodate an ever-growing middle class. The original hierarchy of the district is therefore being repeated, although at a different level, and through these changes, a process of 'regeneration' is taking place which has not, until now, been controlled. It is not, therefore, a paradox that the buildings which are most representative of the district – namely the monumental villas which are being re-adapted to commercial headquarters or, more often, to private residences for wealthy owners – give rise to the greatest concerns regarding their preservation. The builders, after paying large sums to purchase the property and to complete the building works, rarely consider the historical importance that the original building represents, whereas it is still possible to see original plaster and finish in the working-class houses that are not more modest than the others.

The position of the district, convenient for all transport facilities, close to the most important administrative centres, offices and banks, and its infrastructural thoroughfares clearly generate a certain appeal for investors. The fact that other parts of the town are characterised by anonymous buildings dating back to the old regime adds to its appeal. Taking a simplified view of the situation, we can distinguish three different levels (or scales): first the district must be compared to the urban fabric of other similar areas in Bucharest, then the homogeneous lots (as regards typology) inside the district should be examined, and finally the buildings (sub-divided into single dwellings). These three levels of recognition should be preserved from obvious alterations via appropriate intervention, both on the urban and architectural scale. The process of disintegration of this recognition has its origin in construction projects, even the most minute and seemingly insignificant, involving buildings in the neighbourhood: the replacement of gutters, adding fences, new paints and so on, without mentioning the probable changes that have occurred in the layout of the rooms, architectural finishes and interior decoration.

Further to the considerations expressed in the abstract, during my visits in situ I paid particular attention to certain fixtures and fittings, namely exterior window and door frames which contribute to defining the various 'faces' of the district.

The frame is a fixed and opening structure that delimits and seals the opening in a wall, and more rarely, in this district, becomes a screen which delimits a volume (Fig.1). This bald definition of the term cannot explain the impact that different frames have on buildings and on the people who inhabit them. In the first place, frames as structural elements have undergone a technical evolution that has brought about significant improvements since the first half of the 18th century. The large leaded glass windows which were designed by Filippo Juvarra for Palazzo Madama in Turin are an outstanding example of a building technique that had reached its highest level of specialisation; these frames then gave way to modern frames of French origin, whose mouldings and other construction devices improved the seal when closed and consequently the levels

Fig. 1. This interesting modern building still retains the metallic glass window at the corner of the staircase: it is certainly a recognizable element for the inhabitants of the building, unlike the windows of the houses, all replaced by modern wooden frames of windows.

of interior comfort[2]. Currently the 20th-century frames are mostly well preserved in the buildings of the district: they represent the outcome of a technical evolution which dates back to the 19th century; and can be regarded as semi-industrial products, with a significant contribution being made by local craftsmen. These frames are neither innovative nor exclusively a local handicraft. They were not designed to be used elsewhere in Romania, but were rather derived from foreign patterns, whose origin is perhaps to be found in the catalogues[3] of French and German firms. Evidence of technological details is to be found in the papers of International Exhibitions and reports written by Romanian architects during their study-travels to French and mid-western European academies (as it is recorded in numerous publications)[4].

However, great attention was given to improving the technical aspects of frames and their performance, which is probably of vital importance in Bucharest, where the winter climate is harsh – in January the average temperature is two degrees centigrade below zero. In fact, this climate is clearly reflected in the district where we can see examples of double- and even triple-glazed units.

An example is the first villa situated in Strada Rabat, which dates back to the 1940s. This clearly shows the attention paid to the thermal performance of the frames in both living and service rooms: units are made up of two parts (the external one is extremely thin, the internal thicker) which provide good performance as regards heat dispersion and change of air, following a model widely used in mid-northern European countries. A particular detail, widely used but frequently unnoticed, is the use of an internal foldable frame: two shutters each containing a glass panel which can be united using two internal hooks; these create a sealed airspace which improves the thermal insulation (Fig. 2).

Fig. 2. Image of detail of the triple window in the villa in Strada Rabat, 1940 's.

It seems an archaic solution that has adopted traditional technologies to achieve the same performance requirements as industrial glazing fixtures[5]. The frame can therefore be a cypher through which we can read the evolution of manufacturing techniques: in the same building there are in fact many other elements that illustrate the boundary between the industrial solutions and more traditional construction techniques as applied in luxury homes. The false vaults produced using metal framework and a thick layer of cement plaster, and the heating system hidden below the floor (and flanked by traditional fireplaces), although seemingly unconnected, are part of a unique and unified design. As mentioned earlier, we must also consider the role of the window from the point of view of the perception of the architectural work (in its volumetric ratios, its design, the ratio between opaque and transparent openings, etc.), its interaction with the rest of the building in developing an architectural language, and also through

Fig. 3. The building in the image shows how minute changes or replacement of windows contribute significantly to altering the balance of a building, although already subjected to changes through the addition of different storeys and changes to painting.

the technical solutions and detail adopted. In this context, changes even to a single component can irrevocably alter the perception of the building and therefore the transmission of both its tangible evidence and intangible meanings. It is therefore necessary to contextualise the issue of the windows in a broader vision of a protection programme including plastering, volumes, paint and so forth.

Examples of tampering with the building are countless. In Strada Sofia, perhaps the most dramatic example demonstrates the anarchy which has typified construction projects that are slowly distorting the appearance of the neighbourhood (Fig. 3). The main façade of the building is clearly altered from its original symmetry by an extension to its height, the painting (and perhaps even the plaster) have different finishes, the drainage system is clearly compromised and even the windows have been heavily altered. The

most obvious differences occur in the type of doors and windows used in the raised part of the building, where a single frame has replaced the old windows with two opening panels, and the four different colour panes corresponding to the various units housed in the building – a real 'patchwork,' the result of maintenance and construction projects totally unrelated to the material composition of the building and its architectural features (both in terms of internal distribution and in the composition of the volumes). The anarchy of the measures implemented by developers should be brought back within a framework of restoration that protects, as its first priority, the character of the original façades and finishes. Examples of changes disconnected from their context, as mentioned above, occur very frequently in the neighbourhood, especially in the terraced housing and multi-family dwellings originally destined for the lower economic classes. In the case of the dwelling in Strada Brazilia we find no extension or significant transformation to the building, but the replacement of doors and windows and the painting of a part of the façade (Fig. 4): the visual impact of the change once again shows the absence of a consistent design (both at the urban level and the individual building) and the lack of a culture of restoration by the planner. But ignoring the choice of colour, once again it is the windows which show design choices made without proper consideration: the adoption of double-glazed windows in the restored part and replacement in the existing buildings with a 'similar' style (but with doubtful success) and two arched openings which have been filled with rectangular frames, perhaps in PVC.

The comparison with recent images from Google Street View (dated March 2009) shows that the transformation processes are gradual and concern individual building elements (now windows, then render, then perhaps eaves), without a coherent plan. The

Fig. 4. In both buildings you can see the effect that minute changes may have on the fronts of buildings: in both cases the construction projects, in addition to substitution with different window styles, are lack a consistent conservation project.

painting of the exterior is still in progress (in fact the house is for sale) and the upper floor has had all the windows replaced, while they are still partly preserved on the ground floor.

The solution regarding windows is also part of a more general and complex analysis that also considers meeting minimum requirements for comfort and the ways people live. In particular, the issue deserves further study regarding comfort conditions, allowing assessment of the issue in all its complexity. It is simplistic to try to deal with such a varied issue, based only on technical parameters that indicate the performance of individual building components, without considering the quality of construction, installation or the interconnections within the building complex. In buildings as varied as in this case study, an in-depth knowledge of the buildings, their structural organisation and individual building elements can provide useful information for a general improvement of energy performance. Only the application of a coherent system of modifications can ensure the best solution for each individual building. The replacement of antiquated single-pane windows with double-glazed units and other modern techniques will not necessarily represent an improvement in energy performance and therefore a more comfortable environment during the winter months: the thermal isolation within the unit, heat loss through poorly insulated surfaces, replacement of the plaster, reduction of the ventilation in some parts of the houses, and internal humidity control are just some of the factors to consider in a coherent energy improvement project.

The insertion of new double-glazed windows to replace the originals, even where these are in good condition, cannot therefore be the only possible solution to the problem of thermal comfort in homes. This practice, as much as could be seen, seems widespread in the district and in the luxury villas under renovation. In Strada Sofia,

Fig. 5. Presumed comfort requirements suggest to homeowners the need to replace windows and even the addition of exterior shutters.

the designer has chosen to demolish and rebuild the entire building envelope, rather than improve performance by exploiting, for example, the thermal inertia of the walls. Similarly for the frames: it is considered simpler and more effective to replace the frames with new units which are air- and water-tight, without considering that correct ventilation of rooms, for example, prevents the formation of condensation of moisture on the plaster and, in the long run, of mould. The building in Strada Bruxelles, which is another example of a wider issue, juxtaposes two different choices in the same building (Fig. 5); the tenants upstairs have chosen to equip their homes with double-glazed doors and windows and external shutters, in sharp contrast with the neighbouring ground floor. Perhaps heat loss towards the attic, where there may not have been any change, led the owner to this rather questionable choice (not only in aesthetic terms). Solutions for improving indoor comfort while preserving, where possible, the interior fittings are now numerous and verified. The neighbourhood itself gives examples in this regard, for example, with the double and triple windows of some houses; this solution could easily be extended to homes where it is currently lacking (Fig. 6). Clearly we do not propose the conservation of the whole district and its façades; each case must be subject to its own particular design process. In cases where the existing doors and windows are completely unrecoverable,

Fig. 6. The technical design solutions identified in the district exhibit an enviable variety, the image shows an external grill integrated with a glass frame to form a second window.

Fig. 7. Replacing windows with double glazing is to be found in many buildings in the district. The size of the window frames and the presence of fake brass work, together with the loss of other architectural finishes adds to the loss of the particular characteristics of the entire district.

substitutions may be permissible of course, but leaving open the possibility of a design that limits the changes, insofar as possible. The choice must not be towards the slavish copying of the pre-existing window frame, which in this case could be improved in its components, but rather to a compromise, for example, between the thickness of modern frames of doors and windows and the more elegant original – a compromise that has nothing to do with industrialised windows designed to ape lead or brass frames (Fig. 7). A separate issue regarding the maintenance of 19th- and 20th-century windows present in the neighbourhood merits discussion: the only hope for the survival of these artefacts is through the constant care of their components – wood, metal, glass and joints – so that their thermal performance and physical preservation are guaranteed as long as possible. The scheduling of maintenance at regular intervals is recommended as a first step to limit repairs to individual components of windows, or rather their replacement;

a solution which checks only those aspects of performance, continued efficiency of windows (resistance to infiltration by water and air, isolation from the external climate, maintenance of the mechanisms of opening and closing of the doors) in itself helps to guarantee their preservation and proper use, limiting the possibility of substitution (Fig. 8).

Fig. 6. The technical design solutions identified in the district exhibit an enviable variety, the image shows an external grill integrated with a glass frame to form a second window.

The problems of urban regeneration can therefore find a solution only through 're-education' regarding the maintenance and conservation of buildings in the neighbourhood specifically, and the whole city – a re-education that must be directed towards various sections of society, from those commissioning the work (with all the varied social backgrounds), contractors and especially designers. At university level the architect must acquire the basic knowledge needed to effectively implement the protection of historical buildings in their many forms. It is a cultural re-education which in the medium-term could provide, as a direct consequence, an authoritative influence on the choices made by clients who are generally lacking in knowledge, both from a technical but also a cultural perspective, regarding the preservation of historical artefacts. A knowledge and understanding of historical buildings requires the analysis and comparison of the buildings, their architectural finishes, the history of the buildings, their construction techniques, their transformations and their uses. In this sense a thorough analysis of the district, including the analysis so far carried out in the urban areas (i.e. the scale of the neighbourhood) by students of the local faculty of architecture, could provide a body of data and analysis useful for checking and implementing a form of protection of external aspects. Faced with a hostile attitude from residents (even taking pictures of the façades is often interpreted as a violation of domestic privacy), the protection of the external fronts of buildings, which has been present in building regulations since the early 19th-century planned city in most of Western Europe, could be a satisfactory result. Of course the protection of the building should not detract from the protection of the structure as a whole. The façades also provide an indication as to the distribution and shape of the internal structure; the design and finish of the frame can often be 'read', to see beyond the opaque walls of masonry into the internal structure of buildings and identify typical environments (living rooms rather than simple shared stairwells). The first step in the protection of windows and façades should therefore be based on knowledge of the components through a 'catalogue' that accurately identifies the buildings and their corresponding façades both towards public roads and onto private spaces. This is not the place to give an outline for a project for such a register, which should be based on the case study and on a broad participation by both the university and public agencies responsible for protecting buildings, as well as the local government. The catalogue should include, however, the minimum target of a comparison between the existing situation and what is documented in the original archive drawings so as to identify, contextualise and date in a broad context the different types of windows. Only after having reconstructed an overview of the types of fixtures and the transformations that have occurred throughout the neighbourhood will it be possible to devise and implement programmes for protec-

tion, programmes not to be limited to binding regulations, which in practice are often disregarded. The dissemination of this information through its publication, exhibitions, the organisation of meetings and visits to the neighbourhood, institutional workshops and conferences and via a range of channels of communication could instead allow the direct involvement of local residents and designers[6].

Notes

1 As Prof. Amedeo Bellini has recently stated during his lectio magistralis which was held at the Politecnico di Milano, the term 'preservation' does not admit any use of adjectives: in fact, any other term would alter the meaning of the word and its theoretical foundations, having recourse to detrimental (damaging invasive works) in whatever way. (Amedeo Bellini, 'Conservazione e fruizione del patrimonio architettonico: un problema etico'. *Lectio Magistralis* held at the Politecnico di Milano on 17 January 2012.)

2 The technical manuals of architecture record at the end of the 17th century the main types and techniques for the construction of windows, designed because of the cost of glass for the magnificent residences and public or religious buildings; the French, in particular, became major promoters of technical innovation. See the manuals on this subject by Charles D'Avilier (1691), by François Blondel (1698), Bernard Forest de-Belidor (1729) and later, the Treaty of André Roubo Jacob (1769-1782). Among the few studies on windows refer to Sabine Lietz (Lietz 1982). For the past century see the text edit by Franz Graf and Francesca Albani (Graf, Albani 2011) and Maria Conte's PhD thesis (Conte 2009).

3 A catalogue of the main types of modern windows was assembled by Adolf G. Schneck (Schneck 1932).

4 See the texts written by Fabienne Chevallier and Carmen Popescu on the identity of Romanian architecture at the end of the 19th-century (Chevallier 2006: 261-283 and Popescu 2006: 285-313).

5 Among the many considerations of historiography, Schivelbusch debates about that history of illumination based on the 'technological evolution'; Schivelbusch's considerations on the 'technological evolution' are associated with the changes in social structure, renewed industrial processes, the symbolic and political meanings of artificial lighting and economic issues (Schivelbusch 1994).

6 The process of analysis and research on the historical centre of Genoa, initiated and perpetuated by the local faculty of architecture, has demonstrated how coherent dissemination of knowledge can become an effective programme to protect historical buildings.

Bibliography

Chevallier, F. 2006. 'L'affirmation de l'identité nationale de 1860 à 1919 dans l'histoire longue des Roumains.' In J.-Y. Andrieux, F. Chevallier, A. Kervanto Nevanlinna, *Idée nationale et architecture en Europe 1860-1919. Finlande, Hongrie, Roumanie, Catalogne*. Rennes. Pp. 261-283.

Conte, M. 2009. *Modernità alla finestra: la produzione dei serramenti metallici in Italia, 1920-1940*. Ph.D thesis, supervisory prof. Alberto Grimoldi; Politecnico di Milano. Milan.

Graf, F., Albani F. 2011. *Il vetro nell'architettura del XX secolo: conservazione e restauro*. Mendrisio.

Lietz, S. 1982. *Das Fenster des Barock. Fenster und in der Fensterzubehör fürstlichen Profanarchitektur zwischen 1680 und 1780*. Munich.

Popescu, C. 2006. 'Une architecture pour la nation: contexte, idéologie et typologie du style national roumain'. In J.-Y. Andrieux, F. Chevallier, A. Kervanto Nevanlinna. *Idée nationale et architecture en Europe 1860-1919. Finlande, Hongrie, Roumanie, Catalogne*, Rennes. Pp. 285-313.

Schivelbusch, W. 1983. *Lichtblicke. Zur Geschichte der künstlichen Helligkeit im 19. Jahrhundert*. Munich (Italian transl.: Schivelbusch, W. 1994. *Luce. Storia dell'illuminazione artificiale nel secolo XIX*. Parma).

Schneck, A.G. 1932. 'Fenster und holz metall'. In Schneck, A. G. *Die Bauelemente*, Vol. I. Stuttgart.