# Preserving Old Buildings: Adaptive Use for Residential Purposes in Montreal

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### Abstract

Historically, adaptive use of obsolete buildings has developed at the same speed at which social and technological values evolve. During the pre-industrialised era the rate of change was relatively small. Physical obsolescence was the main reason for buildings becoming unsuitable for their original use. Due to the rapidly accelerating rate of change, the 20<sup>th</sup> century saw significant increase in the number of derelict buildings—functional obsolescence grew into the decisive factor on buildings' useful life. Residential conversions, inspired by the 1960s loft conversion phenomenon in New York, became the core of the contemporary adaptive-use practice which offers the most logical solution for the growing stock of outdated but still valuable structures, often with exceptional heritage value.

Since the late 1970s many empty buildings in Montreal have been adapted for residential purposes. The main focus of this thesis is to document and analyse the most representative examples of these projects in order to define the nature and results of the adaptive-use practice in Montreal.

Due to complexity of the field, the framework for analysis must be flexible enough to apply to different contexts and building types, yet firm enough to solve the perpetual dilemmas intrinsic to adaptive-use design. The attitude of this research is that the best way to do this is to learn from architectural, social, and political history—indeed how these types of histories interrelate to form a continuum of popular and professional opinion.

The study starts the examination of the main preservationist and adaptive-use methods with the discussion of preservationist terminology and origins of preservationist theories in Europe. It traces them as they come to North America, examines the roots of adaptive use for residential purposes in Manhattan, and follows the phenomenon as it has appeared in Montreal from the sixties to present. After tracking preservation theory and practice until this point, the parameters for determining what is a successful adaptive-use project become clearer.

### Résumé

Au fil de l'Histoire, l'évolution de l'usage adaptatif de bâtiments désuets a suivi celle des valeurs sociales et technologiques. Un rythme de changement relativement peu soutenu ayant marqué l'ère préindustrielle, la vétusté des bâtiments y était la raison principale de leur obsolescence. L'accélération notable du rythme de changement au XXè siècle entraîna une recrudescence de la quantité de bâtiments en désaffection, la désuétude fonctionnelle devenant le facteur déterminant de leur longévité utile. L'essentiel de la démarche contemporaine d'usage adaptatif prit la forme d'aménagements résidentiels, inspirés du phénomène des lofts new-yorkais aménagés des années soixante. Le fonds croissant de bâtiments désaffectés en attente d'une nouvelle raison d'être, souvent des pièces de patrimoine de valeur exceptionnelle, trouvait ainsi la solution la plus logique à sa reconversion.

Depuis la fin des années soixante-dix, bon nombre de bâtiments désaffectés à Montréal ont été réaménagés en résidences. L'objectif premier de cette thèse sera de présenter et d'analyser les exemples les plus représentatifs de ce type de projets afin de définir la nature et les résultats de la démarche d'usage adaptatif à Montréal.

Du fait de la complexité de cette discipline, la structure de l'analyse devrait être assez flexible pour s'appliquer à divers contextes et types de bâtiments, tout en conservant la rigueur nécessaire pour trancher les inévitables dilemmes inhérents à la conception d'usage adaptatif. La recherche présentée a donc été effectuée en prenant en compte le continuum que les histoires architecturale, sociale et politique forment à travers les opinions populaire et professionnelle.

L'examen des principales méthodes de conservation et d'usage adaptatif par notre étude passe tout d'abord par la considération de la terminologie relative à la conservation et des origines de ses théories en Europe. L'arrivée de ces dernières en Amérique du Nord est ensuite retracée avant de considérer les débuts de l'usage adaptatif à fins résidentielles à Manhattan, et le phénomène parallèle qui en découla à Montréal à partir des années soixante, toujours présent aujourd'hui. Après avoir ainsi suivi la théorie et la pratique de la démarche de conservation, les paramètres qui permettent de déterminer le succès d'un projet d'usage adaptatif sont plus facilement identifiables.

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# **1. Part 1: Defining the Theoretical Framework**

### 1.1. Chapter 1: Introduction

Countries in the throes of rapid development blithely destroy historic spaces - houses, palaces, military or civil structures. If advantage or profit is to be found in it, then the old is swept away. Later, however, perhaps towards the end of the period of accelerated growth, these same countries are liable to discover how such spaces may be pressed into the service of cultural consumption... and of the tourism and leisure industries with their almost limitless prospects. When this happens, everything that they have so merrily demolished during the 'belle époque' is reconstructed at great expense. Where destruction was not complete a "renovation" becomes the order of the day, or imitation, or replication.... In any case, what had been annihilated in an earlier frenzy of growth now becomes an object of adoration, and the former objects of utility now pass for rare and precious works of art (Lefebvre, p. 360).<sup>1</sup>

#### 1.1.1 The Problem

Around the world, the post-WWII period was marked by major ongoing alteration of traditional city cores. The existing urban fabric was especially seriously damaged in North America, through an unprecedented demolition/construction campaign.

As public awareness of the negative consequences of such architectural practice gradually developed, impressive changes in attitudes have occurred over the last four decades of the 20<sup>th</sup> century in both North America and Europe. Opposition to the destruction of the architectural heritage has publicised the importance of architectural preservation, and the protection and perpetuation of architectural, historical or other important qualities—in short the heritage value<sup>2</sup> that a building may have in itself or as a part of its context—has in turn become an important architectural focus. An attitude of respect and care for the existing built context has gradually replaced the philosophy of wholesale reconstruction. Today, in many cases, buildings are currently being preserved instead of demolished. However, it is often pointed out that destruction of architectural heritage is still going on.

<sup>&</sup>lt;sup>1</sup> The parenthetical references in the text indicate only the author's surname; full references are given in the bibliography found at the end of this study. If not indicated otherwise all photos are by the author.

<sup>&</sup>lt;sup>2</sup> There are many qualities to take into consideration when defining heritage value and evaluating proposed interventions and their impact on heritage character. Some of them are: the building's relation to the site, its architectural composition and language, materials, colors and textures. The Canadian *FHBRO Code of Practice* defines heritage character as a "composite amalgam of the various areas of heritage value perceived in a building. In some cases, heritage value may be linked to original building design and attributes, while in others to the changes and additions brought by time" (*FHBRO Code of Practice, p. 12*).

The definition given by the Council of Europe in Article 1 of the *Convention for the Protection of the Architectural Heritage of Europe* adopted in Granada in 1985, considers all buildings, groups of the buildings, and sites, both made by man and by nature, conspicuous for their historical, archaeological, artistic, scientific, social or technical interest, as architectural heritage (*Preserving Our Heritage*, p. 106).

The Venice Charter, in its Article 1, defines heritage as: "The concept of an historic monument embraces not only the single architectural work but also the urban or rural setting in which is found the evidence of a particular civilization, a significant development or an historic event. This applies not only to great works of art but also to more modest works of the past which have acquired cultural significance with the passing of time" (*Preserving Our Heritage*, p. 14).

In order to solve the pragmatic problem of financing building preservation, as well as to satisfy the financial interests to "make buildings pay" (Stovel, 1988), *adaptive use*—adapting obsolete buildings to suit new uses —became the predominant preservationist strategy.<sup>3</sup> This process usually involves alterations of the original architecture and to differing degrees damages the buildings' architectural integrity.

The main problem seems to be the definition of an appropriate adaptive-use design strategy able to bridge the discrepancy between the pragmatic questions connected with profit interests, on the one hand, and responding to a myriad architectural issues—the most important being heritage preservation and satisfying new use requirements—on the other.

Another problem is that although a wide range of building types has currently beeg adapted, the attitude that only exceptional historic buildings merit maximum preservationist attention persists. As a result of such a view, it is often acceptable if younger buildings, generally considered of lesser heritage value, are submitted to a higher degree of alteration.<sup>4</sup>

The nonexistence of a completely articulated preservationist or adaptive-use design theory seems to be at the core of the problem. The existing standards and guidelines, although effective in most cases, are not immune to different interpretations. There is also the tendency toward complete regulation and control, in order both to arrest inappropriate intervention and to guide the design process. At the same time, the inability to entirely cover and confidently tackle the complexity involved has had negative effects—one of them being the restriction of the design freedom crucial for best results.

#### 1.1.2. Methodology

Much of the literature on adaptive use presents and examines case studies seeking to connect theory with practical examples—either to test the theoretical principles or to evaluate completed projects. An analogous methodology is adopted for this study, clearly defining two main segments: the theoretical part (Part 1), containing background information and developing evaluation criteria for project analyses, and the case studies part (Part 2), containing a presentation of case studies and analyses of the selected Montreal adaptive-use projects.

In order to understand the essence of particular architectural/preservationist issues, especially the nature of adaptive-use for housing, this thesis utilises the following methodology:

 $<sup>^{3}</sup>$  This practice of assigning new functions to obsolete buildings became known under various names but for the purposes of this study, the term *adaptive use* will be employed. For a detailed definition of preservationist terms, including adaptive use, see Chapter 2.

<sup>&</sup>lt;sup>4</sup> The situation changed significantly after the formation of the DOCOMOMO (Documentation and Conservation of Modern Movement), which raised the question of recognizing and assigning heritage value to important representatives of Modern architecture, thereby defying a simplistic approach to the criterion: "the older, the more valuable." For a detailed discussion on the protecting of 20<sup>th</sup> century architecture, see Stratton, 1997.

#### 1.1.2.1. Part 1: Defining the Theoretical Framework

1) Analyses of the preservationist reality, not only at a local or national level but also within the dimension of cultural and historical individualities that cause global variations in approaches and philosophies. In this context, emphasis is given to a brief analysis of the most important issues and crucial periods during the last two centuries of modern preservationist practice.

2) Analyses of design issues involved in the adaptive-use practice, with special focus on its preservationist and housing aspects.

#### 1.1.2.2. Part 2: Case Studies;

Using the evaluation criteria from Part 1, case studies were developed in two main phases:

1) The first phase consisted of gathering diverse information and graphic documentation regarding specific projects. The most important sources were books, newspapers and magazine articles, as well as Internet, which provided information on the characteristics of original architecture and Montreal's preservationist and adaptive-use undertakings.

2) The second phase comprised physical surveying, photographing of projects, and interviews. The main accent was on the alteration of original architectural elements, as well as the introduction and the integration of new ones, in order to define the nature of interventions and methods employed. This complemented information collected during phase one.

#### 1.1.3. Organization

#### 1.1.3.1. Part 1

The concise review and analysis of evolution of preservationist theory and practice, as well as of the housing concepts and issues directly or indirectly linked to residential adaptive-use practice, are the main focuses of Part 1.

Adaptive-use design is a very complex issue due to the blurring of the boundary between architectural preservation and new design, between purely heritage and purely pragmatic concerns, and between narrowly architectural and wider multidisciplinary interests. For this reason, besides architectural preservation and housing production as its two central issues, Part 1 also looks into a series of related 20<sup>th</sup> century topics. This introduces a secondary structural framework, whose aim is to correctly locate adaptive use in relation to wider architectural and social reality.

#### 1.1.3.1.1. Chapter 1

Chapter 1 outlines the research problem, the methodology, organization, objectives of the study, its analytical strategy (the structuring principle of the theoretical framework), some selected preservation documents, the thesis' scope and limitations, and its potential contribution.

#### 1.1.3.1.2. Chapter 2

The theoretical part of the thesis begins with a brief examination of various existing preservationist

#### 1.1. Introduction

concepts and methods through a discussion of preservationist terminology. It indicates the general confusion in terminology, which often conceals or alters the essence of particular preservationist methods, as well as the inconsistency in existing terminology and practice, which is a product of both the differences between particular national preservationist strategies and their mutual interdependence.

#### 1.1.3.1.3. Chapter 3

Arguing the position that it is impossible to understand or even discuss the essence of contemporary preservationist methods, especially restoration, without at least briefly addressing their origins, Chapter 3 and Chapter 4 present a short review of the historical development of the preservationist field. Besides the nature of main preservationist methods, they reveal the roots of differences and interconnections within the global preservationist movement that played and continue to play an important role in defining national and regional strategies (this is also generally true of local practices—especially in Montreal). By stressing the diversity of the preservationist reality, these two chapters were also shaped with the aim of indicating the degree of vagueness of existing preservationist criteria and supporting an argument against any exclusive application of any of the existing norms, guidelines or standards.

Chapter 3 focuses on the 19<sup>th</sup> century. This period has left a strong mark on the preservationist field and the achievements attained therein are in great part still valid. Besides the main architectural/preservationist considerations, this chapter concisely examines the geographical, socio-economic and political conditions that influenced the evolution of architectural preservation and the creation of national preservationist strategies.

#### 1.1.3.1.4. Chapter 4

Chapter 4 deals with the principal 20<sup>th</sup> century theoretical discussions and concepts from which systematic architectural/preservationist and adaptive-use strategies and applications have been derived. Focus is on the last four decades of that century, the most crucial period.

A series of interrelated topics are introduced. In relation to the issue of stability and change in the human environment, concepts of design flexibility and adaptability are introduced as the main strategy for addressing building obsolescence.

After a short presentation of the concept of contextualism, this chapter further explores an appropriate relation between the new and old architecture. It expands on particular preservationist and adaptive-use issues such as demolition and restoration of original elements and the relationship between original facades and new interiors of adapted buildings.

Despite the essentially international character of preservationist theory, there are differences on national and local level that are impeding the full implementation of global preservationist policies. In a positive sense, these variations often reflect idiosyncrasies in cultural character and temperament. Having this in mind, the review of the development of the preservationist field was concluded by giving an

insight into the contemporary scene through briefly presenting the few most relevant national attitudes.

#### 1.1.3.1.5. Chapter 5

Although Chapter 5 is, for reasons of organizational clarity, concerned mostly with the housing component of contemporary adaptive use, it suggests that the housing aspect shares many points with other preservationist and architectural concerns and that it cannot be treated as an entirely separate issue.

In the search for defining appropriate design parameters for adaptive-use residential units, this chapter analyses the main housing models relevant to residential units in contemporary adaptive-use projects. These are live-work artists' accommodations in the 19<sup>th</sup> and turn of the 20<sup>th</sup> century, studio houses in New York and live-work spaces (lofts) in Manhattan's industrial structures illegally converted by artists in the 1960s.

Further on, the chapter identifies and analyzes the main design issues regarding the residential aspect of adaptive use. Closest attention was given to unit design and new external residential features, the most important being windows and balconies.

#### 1.1.3.1.6. Chapter 6

This chapter focuses exclusively on Montreal, dealing with its local architectural and preservationist reality. It acts as a bridge between the two parts of the study; it narrows the scope of Part 1 and introduces an analysis of Montreal's adaptive-use projects.

In order to locate the projects in time and in the context of the original buildings, the chapter starts with a brief examination of some crucial points in the physical development of Montreal that left a lasting mark on its urban fabric and created the conditions for the rise of adaptive use. The periods considered are the 19<sup>th</sup> century, the early twentieth century and the post-WWII period.<sup>5</sup>

Chapter 6 continues with an overview of the 20<sup>th</sup> century development of the preservationist conscience in Montreal. Focusing mainly on geographical, socio-economic, and political factors, the goal is to understand the conditions that have influenced the development of local preservation and adaptive-use practice.

#### 1.1.3.2. Part 2

The second part of this thesis relates exclusively to Montreal and its adaptive use practice for housing purposes. It consists mainly of case studies, organized according to the projects' original building types.

In the last couple of decades, adaptive use in Montreal has involved a variety of original building types and has created a large number of residential units ranging from luxurious housing to affordable housing, and from housing for the retired and aged to social housing. In many cases housing coexists with other uses such as offices, commercial or cultural facilities.

<sup>&</sup>lt;sup>5</sup> Assessment of the contribution of a building to the character of its surrounding area involves understanding the evolutionary steps in the development of the area, and the role of the building relative to those important steps (*FHBRO Code of Practice*, p. 47).

#### 1.1. Introduction

According to the purposes for which specific buildings were originally designed, the adaptive-use projects in the Part 2 case study review have been classified into three main groups:

- 1) industrial, which encompasses factories, manufacturing plants, warehouses, and all types of commercial buildings;
- 2) institutional, which includes buildings formerly housing educational and religious institutions, such as schools, colleges, convents, monasteries, and churches;
- 3) other building types:

Adding to the general overview of Montreal development given in Chapter 6, a brief description regarding the development of the related building types is offered at the beginning of each case-study group. Individual case studies are organized in the following manner:

- concisely presenting the original building data and adaptive-use project data (mainly given in footnotes);
- 2) registering changes and alterations by comparing buildings' conditions before and after the adaptive-use interventions;
- commenting on the character of the interventions and applying the knowledge gained in the theoretical part of the study;
- 4) offering the conclusions.

#### 1.1.3.3. Conclusion

At the end of the thesis, there is a final conclusion with commentary on the main issues explored.

#### 1.1.3.4. Appendix

Through an analysis of a few more recent housing projects in Montreal, completed mainly after the thesis research in 2000, the Appendix illustrates the most current local "loft" tendencies. One of the main issues addressed is the evolution of the loft concept, originally exclusively the product of building conversions, to include new construction as well.

#### 1.1.3.5. CD-Rom (Images)

In order to offer the possibility for full graphic examination of the projects, a CD-Rom containing the bank with all the images collected during the research process—including the case studies that, not fitting in its main scope, do not appear in the thesis—have been enclosed at the end of the document.

#### 1.1.4. Objectives

In order to develop the expertise required for implementation of adaptive-use theory and practice, the three direct objectives of this research are:

1) to understand the phenomenon of architectural preservation, with special emphasis on adaptive use as one of its most important facets, by briefly summarising its historical development and assessing

#### 1.1. Introduction

current attitudes from both a global perspective and one specific to Montreal;

2) to identify key design issues with respect to architectural, preservationist and housing issues of adaptive use;

3) to examine the phenomenon of adaptive-use housing practice in Montreal, which has closely followed the preservationist trend since the late 1970s and early 1980s. Considering the fact that there are very few existing studies focusing on adaptive-use projects in Montreal, the study can identify the results and the nature of the design strategies employed.

The first two objectives are aimed towards the development of an analytical framework necessary for the realisation of the third objective.

#### 1.1.5. Analytical Strategy

A philosophical framework is indispensable for both guiding and evaluating the adaptive-use process, primarily in order to prevent the compromising of heritage qualities while satisfying the requirements of a given program. It should be sufficiently flexible and tolerant so as to be responsive to the context of a given project and to parameters varying considerably from culture to culture, designer to designer and, since in a 200-year period modern preservationist practice has been marked by frequent change in attitude and tastes, era to era.

Despite the quite exhausting international and national preservationist documents and standards, there is no completely defined theory capable of providing a universal framework applicable to all projects. This is because design, especially for adaptive use, is a complex process of solving issues differing from one situation to the other, rather than one of instant decision-making in accordance with prescribed rules. Therefore any set of rules, guidelines or standards, independent of their quality—and there are excellent examples that have had an undeniably positive impact on particular national and local practices—cannot substitute for the creative part of the design process. No evaluation criteria alone can or should have the intent to cover all the nuances that are the product of these parameters. Research in architectural history and theory may, however, offer a solid theoretical base for making optimal design decisions and evaluating projects.

Such a structured philosophical framework, interspersed with citations from the most important preservationist documents (that is using them only as a support instead of applying them strictly, as often is the case in practice), helped shape the analytical strategy of the chosen Montreal adaptive-use projects.

#### **1.1.6. Selected Preservation Documents**

During the last two centuries, a significant number of texts have expressed preservationist principles and greatly influenced contemporary preservationist philosophy. The following is a review of the main

documents that have served as a reference for this study.

Many countries have made strong efforts to base the appropriateness of interventions in heritage buildings on internationally accepted principles, adapting them to their particular national preservationist strategies. The main reference was the 1964 *Venice Charter*, which reflects interdisciplinary, local, regional, and national perspectives applicable to practically any project in any country—its unprecedented universality being the sum of all previous international experience. National efforts were supported and guided by ICOMOS (The International Council of Monuments and Sites) and UNESCO. The result was a succession of preservationist charters and documents offering a number of guiding principles.

Following this model, Canada developed a variety of documents, three of which are most relevant for this study: The *Deschambault Declaration* (1982) (*Preserving Our Heritage*, pp. 44-48), *Appleton Charter* (1983) (*Preserving Our Heritage*, pp. 55-57), and the *FHBRO* (Federal Heritage Building Review Office) *Code of Practice* (1993, revised in 1995) (*FHBRO Code of Practice*, 1995). Besides these documents three other internationally appraised documents play an important role in this study: the already mentioned *Venice Charter* (adopted by ICOMOS in 1965) (*Preserving Our Heritage*, pp. 14-16), *European Charter of the Architectural Heritage* (1975) (*Preserving Our Heritage*, pp. 25-27), and the American Secretary of the Interior's Standards (*Preserving Our Heritage*, pp. 61-100), which is considered to be one of the best documents of this kind.

The Charter for the Preservation of Quebec's Heritage (Deschambault Declaration) was developed by Quebec and adopted in 1982 in order to adapt internationally accepted principles to Quebec's cultural personality. One year later, in Ottawa in 1983—acknowledging the Venice Charter of 1961, Australia's Burra Charter and Quebec's Deschambault Declaration (1982)—ICOMOS Canada created the Appleton Charter, offering the Canadian contribution to the field.

*FHBRO Code of Practice* is a doctrinal document written from the point of view of professionals involved in the realization, evaluation and review of interventions on heritage buildings. <sup>6</sup> It is drawn from two main sources: the international principles of conservation, especially *Venice Charter*,<sup>7</sup> and Government of Canada property-management standards and guidelines.<sup>8</sup>

If the SPAB Manifesto (1877) (Morris, 1996, pp. 54-64),9 primarily based on Ruskin's theory, is

<sup>&</sup>lt;sup>6</sup> Herb Stovel, architect, preservationist-activist and former president of ICOMOS, developed this document in 1992 for the HCP (Heritage Conservation Program) of Architecture and Engineering Services for Parks Canada and Environment Canada, Public Works Canada (*FHBRO Code of Practice*, p.1).

<sup>&</sup>lt;sup>7</sup> The central document in the field, the *Venice Charter*, received such close attention from the FHBRO that in the mid-1980s the FHBRO developed an annotated version of the *Charter* for its own use (*FHBRO Code of Practice*, p. 1).

<sup>&</sup>lt;sup>8</sup> In 1995, the document was revised on the basis of comments gathered from a wide range of users within the FHBRO system. It is organized around a number of guiding principles presented in a series of key statements or articles, giving the general framework for judging the quality of proposed changes to heritage buildings, in order to assess the impact these changes on the heritage character, and to examine available means to reduce or mitigate negative impacts (*FHBRO Code of Practice*, p. 2).

<sup>&</sup>lt;sup>9</sup> For a more detailed discussion on 19<sup>th</sup> century development, including SPAB's (Society for the Protection of Ancient

the 19<sup>th</sup>-century document that contributed most to the creation of present attitudes, then the 1931 *Athens Charter* (which marked the birth of the international preservationist movement) and the 1964 *Venice Charter* are, in the same sense, the most important 20th century preservationist documents. The *Venice Charter* was adopted as a resume of the 2<sup>nd</sup> International Congress of Architects and Technicians of Historic Monuments held in Venice (1964), where the *Athens Charter* was examined afresh in order to offer a new document with larger scope and to formulate the basis of contemporary preservationist philosophy. In short, the principles of the *Venice Charter* urged the strictest authenticity in future preservation activities, as a reaction to the negative aspects of the European post-WWII reconstruction.

The *European Charter*, <sup>10</sup> adopted in 1975, was drafted with the intention to coordinate Europeanwide efforts to make the public more aware of the cultural, social and economic values represented by historic monuments, groups of old buildings and interesting sites in both urban and rural contexts.

The American Secretary of the Interior's *Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings* have been developed to direct work undertaken on historic buildings in the United States:

The Secretary of the interior's Standards for rehabilitation and Guidelines for Rehabilitating Historic Buildings have become criteria against which the success or failure of rehabilitation and adaptive use are judged. To developers intending to use investment tax credits successfully, adherence to the secretary's standards and guidelines is basic. With this the rehabilitator has a guide book to the dos and don'ts of the process (Murtagh, 1990, p. 123).

#### 1.1.7. Scope and Limitations

While indirectly addressing political, economic or social issues that strongly influence and often constrain preservationist intentions, the focus of this study is principally on architectural and preservationist issues of adaptive use.

#### 1.1.7.1. Part 1

Special attention was given to the two most important periods in the founding of the modern preservationist concepts: the 19<sup>th</sup> century and last four decades of the 20th century. The aim of this brief overview, mainly concentrated within Chapters 3 and 4, was to support the discussion in Chapter 2 on the main preservationist terminology and methods and to introduce the analysis of modern adaptive use.

Contemporary adaptive use for residential purposes is closely related to 1960s Manhattan artists' lofts conversions. It conceptually, physically and developmentally shares many points with the turn of the 20<sup>th</sup> century New York artist studio houses. It is through the analysis of these three concepts that the main housing issues related to adaptive-use are considered.

Buildings) activities and its 1877 Manifesto, see Chapter 3.

<sup>&</sup>lt;sup>10</sup> The European Charter of the Architectural Heritage was adopted by the Committee of Ministers of the Council of Europe and was solemnly proclaimed at the Congress on the European Architectural Heritage held in Amsterdam from 21 to 25 October 1975 (*Preserving Our Heritage*, p. 25).

Special importance is also given to the theoretical discussions that were brought forth mainly in the 1960s and 1970s—spurring a revival of interest in the existing built environment and paving the way for development of the contextual design strategies concerned with architectural preservation and the appropriate fit between existing and new architecture.

When addressing political and socio-economic issues, emphasis is put on the significant changes that influenced the development of current preservationist attitudes on both a global perspective and a local Montreal scale.

#### 1.1.7.2. Part 2

The main intention of Part 2 is to assess housing production within legally undertaken (privately or with government support) adaptive-use projects implemented since the late 1970s in the inner city of Montreal. Illegal adaptations, which still represent an important facet of local adaptive use practice, <sup>11</sup> do not fall directly within the scope of this study.<sup>12</sup> Design issues peculiar to illegally undertaken residential conversions have been explored through an analysis of pioneer Manhattan lofts.

It is not possible to cover all of Montreal's adaptive-use projects within a single study. Only the most important ones, chosen from the main original building types, have been presented. The projects have also been selected in such a way as to exemplify different housing categories: co-owned housing/condominiums (ranging from modest loft units to luxurious apartments), cooperative and low-cost housing, subsidised housing projects for elderly or retired citizens and student housing.

Due to their exceptional heritage value, industrial and institutional buildings have been given priority; although exceptional individual examples of other building types have also been included. In order to offer a better insight into Montreal adaptive-use practice, besides the projects involving high heritage value structures, this study also includes a few projects involving less important buildings that have increasingly been considered for adaptive-use undertakings.

In some cases it is the form, in others the plan that best expresses the identity of heritage buildings. Of all architectural elements, facades have the strongest influence on an environment's character. They are the public face of heritage buildings and their most obvious source of meaning. No less important however are the original attributes of interior spaces. They directly relate to the buildings' original functions and, by being also partially reflected on façades, they update and complete the

<sup>&</sup>lt;sup>11</sup> The conversion of obsolete buildings in Montreal actually started in the mid-1960s, when a number of artists illegally occupied and converted many abandoned spaces around the city, mainly industrial, into work-living units. This created a Montreal version of New York's loft living. Occupation was illegal because the introduction of residential use was infringing upon the existing exclusive industrial zoning. The interesting thing about the Montreal housing market is that even today many of the recycled housing units belong to this "illegal" sector. "C'est illegal mais c'est toléré," explained John Gardiner, responsible for housing in the executive committee of Montreal (Baillargeon, 1994). According to certain estimates by the City of Montreal, between 400 and 600 artists live in commercial buildings; but in fact hundreds of lofts in Montreal have unclear legal status (Baillargeon, 1994).

<sup>&</sup>lt;sup>12</sup> On illegal residential adaptations of Montreal's obsolete buildings see Podmore (1994).

#### 1.1. Introduction

buildings' identities. New interior layouts alter both the interior and exterior attributes of the adapted buildings, including their original relations to each other. For these reasons, facades and interior layouts, both before and after the adaptive-use interventions, received the closest attention.

#### 1.1.8. Potential Contribution and Significance

Initially, during the 1970s and early 1980s, instead of being based on proper expertise, adaptive-use interventions were undertaken on an ad-hoc basis without much relevant previous experience or theoretical support. Practice was shaped by adapting knowledge from new construction and was almost completely left to the mercy of market imperatives almost exclusively concerned with buildings' valuable physical assets. After some experience had been garnered, appropriate literature started to appear in the 1980s. Today, a relatively significant amount of information on preservation and adaptive use is readily available, but there is still an enormous amount of work to be done before adaptive use occupies its deserved position in architectural discourse.<sup>13</sup>

With respect to the specific case of Montreal, although it has been approximately two decades since completion of the first significant residential adaptive-use projects,<sup>14</sup> there are relatively few comprehensive assessments of either completed projects or local preservationist and adaptive-use strategies. Envisioned as an introductory study, this thesis is intended to help bridge this gap.

One intended contribution of this thesis, particularly in the theoretical analysis of Part 1, is its proposal of a research and evaluation methodology for specific local practices. As will be seen later, general design issues and the variety of particular local issues relevant to the topic can be isolated and examined. Through such a structured analysis, besides providing a framework for the evaluation of Montreal's adaptive-use experience, Part 1 is meant to stand alone as a valid study, contributing to the general theoretical background.

It is hoped that this study will expand our knowledge, allowing designers to make more informed decisions about the interventions they propose.

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<sup>&</sup>lt;sup>13</sup> Adaptive use is still frequently being identified as loft conversion, in keeping with the image of the original Manhattan lofts. Paola Galo starts her book on lofts in Italy by addressing the need for more profound research on loft design: "Despite being a highly stimulating subject with multiple implications, loft design has been largely overlooked by writers on architecture, particularly in Italy, where there has seldom been any systematic assessment of the subject, not even for purely documentary purposes. On the other hand, it should be noted that the "loft lifestyle" has not yet been allotted a precise interpolative category in the history and evolution of the domestic space, nor has it been classified within the new theoretical categorizing of residential accommodation and urban transformation, except in marginal, episodic instances" (Gallo. p. 8).

<sup>&</sup>lt;sup>14</sup> "The Cour Le Royer [first three phases being completed in 1978] is considered by many urbanists to be the first large-scale rehabilitation project to inject a significant number of residential units back into Old Montreal" (Friedman, 1994, p. 20). See case study "le Cours le Royer" (pp. 70-4).

### **1.2. Chapter 2: Defining Architectural Preservation**

#### 1.2.1. Introduction

An important segment of the preservationist terminology used today originates from the earliest evolutionary phases of the preservationist field. Even though the terms basically remain the same, in some cases the nature of the methods used and architectural context for which they were originally created have been transformed. Besides leading to terminological confusion, this also creates a situation whereby arguments used to endorse certain methods are not always in accord with genuine preservation objectives.

"Europe and America resound with the terms Preservation and Conservation, and may I be lucky in my definition to become accepted: Preservation deals with individual buildings, Conservation with areas. Preservation in this sense is old, conservation is recent." says Sir Nicolaus Pevsner in his foreword to the Tschudi-Madsen book *Restoration and Anti-restoration* (Tschudi-Madsen, 1976, 7). This only touches on the increasing ambiguity of the terms caused by pressure on the preservationist field after the tremendous alterations of the post-WWII built environment.

Because of the complexity of the field, understanding the real nature of methods employed during architectural interventions on existing buildings is not a simple task. This is the main reason for the vagueness and confusion of existing preservationist terminology. While almost every major theoretical work in the field employs in part its own vocabulary, the real problem often seems to be created by terminologies fashioned by various local publications (Simard, 1990). This problem has been exacerbated by revolutionary changes in 20<sup>th</sup> century architectural and socio-economic fields. Newly introduced methods and related terms have shaken preservationist theory, which had been based almost exclusively on 19th century achievements. Retrofitting, recycling, restoration, updating, reconstruction, rebuilding, reparation, modernization, amelioration, remodelling, rehabilitation, renovation, revitalization... are just part of the list of existing terms which attempt to define the multitude of preservationist approaches.

There is a notable difference between the character of European and North American preservationist practices, partly due to the devastating effect of WWII on Europe. Nevertheless, larger North American cities, especially their inner parts, experienced similarly detrimental effects—in this case produced by the post-WWII construction campaign and the intensive demolition of traditional architectural and urban context.

The European mentality, with its long history of organic architectural development, is rightly or wrongly characterised by a higher resistance to change. There is a lesser sense of dramatic change in lifestyle and openness to new ideas than in North America. This has been especially evident in the second half of the 20<sup>th</sup> century. During the post-war period, new development in Europe occurred at a lesser intensity and caused less destruction than in North America, where *urban renewal* and unprecedented

new construction has greatly impacted the existing built context. However, this is not currently the case; a much bolder and larger scale alteration of original architecture is notable in Europe, especially Italy.

There is another important fact that distinguishes preservationist practices in these two main blocks. European history implies a significantly older and larger legacy, meaning more material decay and consequently a greater difficulty in focusing on an entire building stock than in Canada or the United States.

Yet even within these two main blocks there are national and local differences. Due to the essentially international character of the field, linguistic idiosyncrasies often justify the assignment of different terms to basically the same concepts, or the same term to more than one notion, thus either reducing or stretching the realm of the particular preservationist strategies in search of a justification for the proposed interventions.

For example, the term *restoration* may have as much as three different meanings: it most often refers to a particular preservationist approach, although together with *preservation* and *conservation*, which can also refer to specific preservation method, it can also serve to name the entire discipline dealing with the protection of architectural heritage, or simply the preservationist intervention in general. Risking overgeneralizing, this study will use the term *preservation* when referring to the entire discipline of protection of the existing built context, and reserve *conservation* and *restoration* for specific preservationist methods.<sup>15</sup>

In general, mainly due to the negative aspects of 19<sup>th</sup> century preservationist experience and especially Ruskin's theory, which opposed the tampering with original architecture (see Chapter 3, pp.27-8), the *restoration* concept still carries a negative connotation. Such an attitude is essentially opposite to the Italian approach to architectural restoration, often identified with the work of Cezare Brandi (see Chapter 4, p. 43), which considers buildings as any other work of art and may include significant interventions to the original architecture.<sup>16</sup>

<sup>&</sup>lt;sup>15</sup> Interventions of the type and scale as the rebuilding of European cities after WWII, or the ones undertaken in Williamsburg and, on a smaller scale, in Quebec's Lower Town, introduced a new dimension into the preservationist field. Even though such significant recreation of the original architecture, where historical evidence was used to recreate entire structures and urban ensembles or restore missing architectural elements, have many parallels with 19<sup>th</sup> century restoration practice, it seems correct if, for the purposes of this study, the terms *rebuilding* and *reconstruction* are assigned to such significant undertakings, in order to reserve the term *restoration* exclusively for the smaller scale interventions on individual structures.

<sup>&</sup>lt;sup>16</sup> In his *Introduzione al Restauro*, Nullo Pirazzoli gives a useful and interesting classification and interpretation of the main methods employed in the preservationist field (Italian *Restauro*) (Pirazolli, p. 7 and pp. 13-14). For him, the primary types of interventions are: maintenance (*la manutenzione*), conservation (*la conservazione*) and restoraton (*il restauro*). The purpose of *manutenzione* (from Latin *manu-tenére*) is keeping buildings alive or in use (*tenere in vita*) or preventing or repairing the physical deterioration caused by diverse factors. *Conservazione* (from Latin *confermare*) involves activities whose aim is to confirm (*confermare*) the existing state—to arrest the deterioration or any other ongoing process. The concept of *restauro* (already ambiguous in its intrinsic etymological nature originating from the Latin *re-sisto* or *istemi*—verbs which mean to erect, to pour, to rise) Pirazzoli splits in two different methods: "*ripristino*" (reversion or return to the original or some of the prior states) whose purpose is to reinstall the morphological conditions either from the moment of conception or from the chosen period in the buildings' past; and "*restauro*" which can imply the creation of different material and morphological conditions, including additions, removal or substitution of the original architectural features. All these methods—*conservazione* and

*Revitalization* is another important and frequently heard term, the meaning of which is similar to *restoration*. From the point of view of this study, however, the term *revitalization* is applicable to the current practice of resuscitating central parts and neighborhoods of North American cities.<sup>17</sup>

#### 1.2.2. Preservationist Methods

Despite widespread rejection, the arguments against architectural preservation—that it represents a retreat from design thinking and appreciation as a "mayor domo of the status quo" (Wells and Bunster, 1998)—can still occasionally be heard. However, contemporary architectural preservation is no longer limited to ensuring historical continuity by preserving the existing built environment; it also deals with new architecture, which can take the form of both entirely new structures within historical complexes or interventions of a different scale on particular existing buildings (exceptions are extraordinary historical architectural monuments, which are usually conserved as much as possible).

Evolving from the major preservationist concepts that marked the 19<sup>th</sup> century, such as *unité de style*, Pugin's religious and moral argumentation for the Gothic Revival or Ruskin's and Morris's claim to unconditional protection,<sup>18</sup> and having as a reference the sobering experience of the 20th century's worship of the new, the following strategies have emerged as the most important ones within the current practice of building preservation:<sup>19</sup>

1. Maintenance-the building is regularly maintained and repaired;

2. Conservation-the original state is maintained as much as possible;

3. *Retrofitting*— the building is updated to the *current* new technical, esthetic or any other current requirements (retrofitted or refurbished);

4. Adaptive use-the building is adapted for new use.

manutenzione in the lesser, while restauro and ripristino in higher degree—involve material and morphological alterations.

According to Pirazzoli, manutenzione implies architecture as an artificial organism, conservazione as a historiographic document, ripristino as historic document or historic event, returning to the state of the chosen historical moment; while restauro treats architecture as an open story which continues to develop as it changes over time: "Preliminarmente possiamo dire che: 1) manutenzione sta ad 'architectura come organismo artificiale'; 2) conservazione sta ad 'architectura come documento storiografic'; 3) ripristino sta ad 'architecttura come documento storico'; 4) restauro sta ad 'architecttura come opera aperta'" (Pirazolli, p. 14-15).

<sup>&</sup>lt;sup>17</sup> Montreal's example would be the revitalization of Old Montreal.

<sup>&</sup>lt;sup>18</sup> For explanation of 19<sup>th</sup> century restoration practice including philosophy of Ruskin and SPAB tenets, see Chapter 3.

<sup>&</sup>lt;sup>19</sup> According to Canada's Appleton Charter (1983) which defines different activities and levels of intervention within the built environment, there are four main activities: *Maintenance*—continual activity to ensure the longevity of the resource without irreversible or damaging intervention; *Stabilization*—a periodic activity to halt deterioration and to put the existing form and materials of a site into a state of equilibrium, with minimal change; *Removal*—a periodic activity: modification which involves the subtraction of surfaces, layers, volumes and/or elements; *Addition*—a periodic activity: modification which involves the introduction of new material (Appleton Charter, in *Preserving Our Heritage*, p. 56).

There are also five levels of intervention: *Preservation*—retention of the existing form, material and integrity of site; *Period Restoration*—recovery of an earlier form, material and integrity of a site; *Rehabilitation*—modification of a resource to contemporary functional standards which may involve adaptation for new use; *Period Reconstruction*—recreation of vanished or irreversibly deteriorated resources; and redevelopment—insertion of contemporary structures or additions sympathetic to the setting (Appleton Charter, in *Preserving Our Heritage*, p. 56).

Dealing with similar problems, building obsolescence the most common, these methods share many practical elements. In practice, none of these methods is used exclusively; they are combined in varying degrees, depending on the particular project. No building is ever conserved by keeping its state prior to the intervention intact. Some of its features are judged-rightly or wrongly, depending on the criteria applied—as non-original, or with little or no architectural value, and usually eliminated. Sometimes, certain features that have disappeared over the building's life are restored to their original form. Even during retrofitting, generally regarded as the least intrusive intervention mainly dealing with fittings and furnishings, the original character is partially altered through changing original architectural elements and the adding of new ones.

In the case of adaptive use, alterations are more substantial. Thus, a typical project involving building adaptation for new use could entail building repairs, alteration of certain original elements (including their restoration) and the addition of new ones. However, irrespective of which procedures are adopted for particular projects, the conservation component-investing maximum effort to preserve the original architecture as much as possible-should be paramount.<sup>20</sup>

#### 1.2.2.1. Maintenance

Proper continuous care in the form of maintenance and repair of damaged components is considered, regardless of the country, the most appropriate and least invasive preservationist method. This is not a recent conclusion. Ruskin's philosophy and the SPAB opposed the 19<sup>th</sup> century preservation (restoration) tradition based on significant alteration of original architecture; the proposition being that architectural heritage should be carefully repaired without any change.<sup>21</sup>

<sup>&</sup>lt;sup>20</sup> "Heritage Conservation Principles," given in the Canadian FHBRO Code of Practice combine practically all these particular methods and illustrate the intricacy of the building preservation (note: the FHBRO Code employs the term conservation for preservation in general). The following principles are selected according to the relevancy to this study and listed under their ordinal numbers as given in the document:

<sup>1.</sup> Minimum Intervention: Heritage character is best protected by a minimum intervention approach, that is, by selecting approaches to meet functional goals which offer the least harm to heritage character.

<sup>3.</sup> Balancing Principle: Interventions respectful of heritage character will balance application of heritage conservation principles concerned with caution (prudent care), with honesty (concern for truthful expression) and with fit (concern for compatibility of the parts and the whole), in relation to the most important values of the heritage building.

<sup>4.</sup> Principles Of Caution: Here, the primary concern is preserving the surviving building fabric.

<sup>5.</sup> Principles Of Honesty: Where formal (or design) values are of most importance, efforts to recover lost or obscured forms become important; in general, approaches requiring restoration of lost coherence or clarity to reinstate symbolic significance, supported by concern for the principles of honesty, will be most appropriate in ensuring respect for those values. A principle of honesty is legibility: for example, the need to ensure added or altered materials are distinct from significant historic materials, without impairing the aesthetic value of the whole.

<sup>6.</sup> Principles Of Fit/Compatibility: Interventions respectful of heritage character should be guided by the principles of fit (or compatibility), for example, harmonizing proportions, colour, texture, forms, materials or structural characteristics of added elements, when dealing with contextual values. Where contextual values are concerned with physical relationships, the primary concern may be preserving or re-establishing important relationship between and among building elements and the whole; where these values are concerned with functional context, re-establishing proper fit between a building and its use would become important (*FHBRO Code of Practice*, pp.17-20). <sup>21</sup> The following guidelines for appropriate maintenance and repair are given by *FHBRO Code of Practice*:

<sup>1.2</sup> Reducing Risk-all maintenance measures should be non-abrasive, non-destructive and environmentally benign. 1.3 Retention Preferable To Replacement-repair or consolidation measures which retain original material are always preferable to those intended to replace it.

<sup>1.4</sup> Replacement As A Last Option-replacement [of the original elements] should occur only where the major part of

#### 1.2.2.2. Conservation

Conservation normally arrests any ongoing process of physical deterioration or alteration, and maintains to the maximum extent original building forms. Sometimes absolutely protecting heritage values, this is considered to be the most rigorous treatment.<sup>22</sup> Nowadays, it is deemed applicable to only a relatively small number of exceptional heritage monuments. It sometimes involves the introduction of new use, mainly chosen in accord with the criteria of securing maximum public access to the heritage (e.g. a house into a museum or gallery).<sup>23</sup> Although usually financed by governments, conservation projects do involve certain economic considerations (it is desirable if the new use could self- finance the maintenance), but these are far outweighed by cultural or historical motives.

#### 1.2.2.3. Retrofitting

Intervention that seeks to bring stylistic, technical or comfort characteristics of buildings to current standards—entailing the repair and replacement of outdated and deteriorated elements (inevitably involving a certain degree of alteration of the original features)—is known under various names: *retrofitting, refurbishment, modernization, amelioration, rehabilitation* or *renovation*.<sup>24</sup> In the case of Montreal, this method has been generally applied to various hotels, office towers, and the retail sector.

The criteria extend to the exigencies of commercial competition, which can require aesthetic changes on the exterior and more often in the interior of the building. With older buildings, the improvement of technical characteristics is often necessary.<sup>25</sup> These interventions usually may be attained without severe impact on the heritage character.<sup>26</sup>

an element is decayed beyond repair.

<sup>1.5</sup> Appropriate Repair—Repair measures should retain original material and detailing to the greatest extent possible, except where these cause deterioration of other elements.

<sup>1.7</sup> Appropriate Replacement—Replacement measures require, to the greatest extent possible, the use of like materials and detailing, ...

<sup>1.8 &</sup>quot;Maintenance Free" Materials—The substitution of maintenance-free materials such as aluminum, fiberglass or vinyl for original materials is not recommended. These materials reduce the heritage character and may alter the desirable characteristics of building envelopes and systems (FHBRO Code of Practice, pp. 25-27).

<sup>&</sup>lt;sup>22</sup> "No new construction, demolition or modification which would alter the relations of mass and colour must be allowed" (Venice Charter, Article 6, in *Preserving Our Heritage*, p. 14).

<sup>&</sup>lt;sup>23</sup> "The conservation of monuments is always facilitated by making use of them for some socially useful purpose. Such use is therefore desirable but it must not change the layout or decoration of the building. It is within these limits only that modifications demanded by a change of function should be envisaged and may be permitted" (Venice Charter, Article 5, in *Preserving Our Heritage*, p. 14).
<sup>24</sup> While most of these terms properly describe the essence of the method, *rehabilitation* and *renovation*, also have

<sup>&</sup>lt;sup>24</sup> While most of these terms properly describe the essence of the method, *rehabilitation* and *renovation*, also have wider meaning in the sense that they do not automatically imply the level and scope of the proposed intervention; nor do they reveal exactly its nature; they can mean updating of the building, but they are often used as a synonyms for the methods indicating larger interventions resulting in significant architectural alterations, including change of use. For example an important document such as the American Interior Secretary Standards for Rehabilitation assigns a much wider scope to the term rehabilitation, using it as a synonym for the preservation of buildings through their adaptation for new uses—method for which Murtagh (1990) assigns the term adaptive use (this study uses the term adaptive use in the same way).

<sup>&</sup>lt;sup>25</sup> Common interventions include amelioration of weather exclusion, or thermal and acoustical performance, by adding vapour barriers, insulation and new finishes, and upgrading the performance of windows. It may include the introduction or modification of HVAC systems, new power/voice/data cabling systems, new lighting systems and fixtures, and other new fittings and furnishings.

<sup>&</sup>lt;sup>26</sup> In the FHBRO Code of Practice Guideline, "Design Of Fittings And Furnishings" address the preservationist aspect

#### 1.2.2.4. Adaptive Use

Changing a building's original use, as a way of prolonging its useful life, is presently one of the most prevalent preservationist treatments. It is known under different names: *adaptive use* (also frequently *adaptive re-use*), *recycling* and *conversion*, or *rehabilitation and renovation*. *Adaptive use* seems the best term to describe the method whose aim is to bring the building back to life by adapting it for a new function. American National Trust defines *adaptive use* as "the process of converting a building to use other than for which it was designed, e.g. changing a factory into housing. Such conversions are accomplished with varying alterations to the building" (Murtagh, p. 116). The other terms could also imply different, in most cases more general, meanings. For example *recycling* is currently a very popular term, describing an important facet of the environmental preservation campaign.<sup>27</sup>

Although adapting buildings for different uses is more common in the last few decades, it is not a recent innovation. The adaptation of existing structures for different uses has always existed, although on a much smaller scale than is the case today.<sup>28</sup> Before the Industrial Revolution building obsolescence practically did not exist. The biggest problem was physical decay, hence change of function was not a frequent topic. Buildings usually maintained their original use throughout their physical life. This changed with the start of the Industrial Revolution, when building obsolescence became an issue due to frequently changing use requirements. This problem was chiefly tackled by demolishing and building anew, which would become the predominant architectural strategy in the post-WWII period. Such a strategy remained predominant until the rise of architectural preservation, and particularly adaptive use, in the second half of the 20<sup>th</sup> century.

The main challenge of adaptive use is to integrate the adapted building architecturally, functionally and economically while preserving its historicity. Though both adaptive use and conservation involve finding new uses for historical buildings, adaptive use—most often initiated by private capital whose main motivation is economic gain—differs from conservation, which is usually financed by government and focused primarily on heritage protection. The demand for maximum profit is often directly opposed to the issue of heritage protection and may compromise its architectural integrity. This

of building update, giving recommendations which are valid not only for new fittings and furnishings but whenever new architectural elements are introduced: "In general, the design of new fittings and furnishings (such as those associated with open office layouts), should be contemporary in nature and respectful of the heritage character of the building. Provision of details which imitate historic elements is confusing and devalues the importance of genuine surviving building elements" (*FHBRO Code of Practice* p. 45).

<sup>&</sup>lt;sup>27</sup> Making use of built assets is an important part of the recycling phenomenon, which itself is part of the wider environmental concern characteristic of modern society. The environmental advantages of making use of old buildings include reusing valuable materials (older buildings were usually built using traditional techniques and materials, such as brick, wood or stone masonry) and energy saving in different forms.

<sup>&</sup>lt;sup>28</sup> Earliest, still existing, examples of adaptive use include Roman amphitheatres in Arles and Nimes in southern France, as well as the palace of the last Roman emperor Diocletian in Split in Dalmatia, that were transformed into small, fortified towns. Other medieval adaptive-use examples include conversion of amphitheatres in Rome, Paris, Florence and Lucca into housing.

was especially notable in the early evolution of adaptive use, when it was subject to almost unrestricted dominance of economic reasoning at the expense of architectural values.<sup>29</sup>

The issue is how to undertake the alterations necessary to prepare the building for new use without destroying its original architectural character. The latter cannot be equated only with the mere survival of physical elements—architectural features, materials and finishes or keeping original scale and proportions—but also with the perpetuation of qualities which, while not always directly obvious, define the original identity and atmosphere.

Besides securing a realistic scenario for building preservation, regardless of the age and condition of a given building, adaptive-use practice is supposed to accommodate new functions in a manner equal to, if not better than, new construction, especially considering that the life expectancy of the average adapted old building is much longer than the thirty- or forty-year lifetime of many contemporary buildings (*FHBRO Code of Practice*, p. 49).

In addition to the almost unavoidable minor alterations, significant new additions or demolitions are often required to satisfy the new use requirements imposed on the original structures. These interventions make adaptive use the most drastic of all preservationist approaches. Its negative side, expressed by often substantial interference with the original architecture, is continually investigated and compared with its beneficial effects. However, even with sometimes dubious preservationist results, assuring buildings' survival is an undeniably strong argument in its favour.

In addition to the variety of pragmatic motives,<sup>30</sup> there are motives of a different, less tangible nature: they are the symbolic, historic and aesthetic qualities of unquantifiable value in age, character and architectural expression. As the heritage value of built resources has become understood and widely accepted over the last couple of decades, the border between pure preservationist and pure utilitarian or pragmatic interests is being blurred. Economic argumentation, although strongly present, is increasingly losing its almost exclusive initial weight, progressively giving way to the imperative of satisfying preservationist issues. Besides being increasingly employed for marketing purposes, certain preservationist aspects such as the extraordinary design characteristics of old buildings—if adequately explored—are able to dramatically elevate the quality of new-use accommodation.

<sup>&</sup>lt;sup>29</sup> While economic issues were almost the exclusive justification for conversion projects undertaken in the initial phases of the adaptive use evolution, pragmatic issues are still a powerful motivator. The various interested parties include building owners and developers who invest their assets and generate profit, and cities, with their interest to facilitate maintenance and use of those buildings that have become a financial burden.

<sup>&</sup>lt;sup>30</sup> It is believed that reuse of existing structures brings a series of benefits, such as:

<sup>-</sup>lesser costs of building conversion than new construction due to savings in labour, building material and energy, as well as due to the shorter construction period, quicker client occupancy and return of investment

<sup>-</sup>possibilities for a wide variety of new uses—due to often flexible, relatively easy to reuse, vast and undivided spaces in old structures.

However, the practice often proves that these expectations are not always met in the reality; particular interventions on existing architecture can be very labour intensive and not all building types are equally suitable for particular new uses.

#### 1.2.2.5. Restoration

Initially covering interventions of different degree and scope, *restoration*<sup>31</sup> was first defined at the beginning of the 19<sup>th</sup> century preservationist debate. The declared aim was the reparation and preservation of heritage structures; but this also included interventions which had the objective of "correcting" buildings by removing additions accrued over the buildings' life, or completing them to math a stylistic ideal from the restorer's preferred époque.

It is interesting to consider the relation between the two most often heard terms: *preservation* and *restoration*. While the 19<sup>th</sup> century notion of *restoration* essentially covered the entire preservationist field, and even today is often used in the sense of a synonym for *preservation* and *conservation*, it is important to define these terms with some precision.<sup>32</sup>

While preservation, for this study, represents the entire field of perpetuation of the existing built context, restoration can be defined as a set of preservationist techniques which imply varying degrees of interventions on the existing architecture. The modern preservationist practice—its important factor being the addition of new elements to satisfy the design programmed by functional and stylistic requirements—requires the redefinition of the traditional restoration concept, basically limited to the restitution of missing original elements or removal of existing architectural elements in order to reveal important original heritage qualities.

The preservationist documents attempt to define the contemporary notion of restoration. The following are the *Venice Charter* articles that best relate to restoration in the context of this study:

The intention in conserving and restoring monuments is to safeguard them no less as works of art than as historical evidence (Article 3).

The process of restoration is a highly specialized operation. Its aim is to preserve and reveal the

<sup>&</sup>lt;sup>31</sup> The word restauration is derived from *staŭros*, which means stake or pole in Greek and Latin. Restoration actually means to restrengthen the poles – implicit in the military defence system – the palisades. The term restore very soon acquired the general meaning of repair. Samuel Johnson in his famous Dictionary of 1755 simply states that Restoration is "the act of replacing in former state". It was however, Viollet-le-Duc's definition from 1866 which should be the classic one: "To restore a building is to reestablish it to a complete state which even may never have existed at any particular time." Such a way of thinking evidently gave room for fantasies, and the architects themselves decided what the past should have looked like! By the mid 19<sup>th</sup> century Restoration had become mania. In 1849 Ruskin lashes out against Restoration in "The Lamp of Memory": "Restoration, so called, is the worst manner of Destruction ... Restoration is always a lie". In 1862 the English architect G. G. Scott "almost could wish the word restoration expunged from the architectural vocabulary". In 1879 William Morris describes it as "wholesale destruction" and in 1891 "restoration is a fallacy and an impossibility". (The above quotation is from the "Introduction", to Tschudi-Madsen, *Restoration and Anti-Restoration*, Oslo 1976, pp. 13-18) (Tschudi-Madsen, 1985).

<sup>&</sup>lt;sup>32</sup> In 1845, however, Prosper Merimé had already stated that "By restoration we understand the conservation of that which exists..." (Rapport sur la restauration de Notre Dame de Paris). Even if his way of thinking did not prevail, the notion to "conserve" was brought into discussion. The word conservar in Latin is derived from the prefix *con* which can mean "together with" and often has a strengthening effect, and *servare* which means to protect, to guard, to save. [...] *Preservation* is often used in the same sense as *conservation*. Preservation is, however, something else, and we should try to distinguish between them. Preservation is derived from the Latin word *prae* which means before, and *servare* which, we have seen, means to guard, to save. Thus the original meaning of preservation is preventative, to protect in advance. Although the root servare is the same in both words, the main difference is the more dominating preventative effect which is implied in Preservation (Tschudi-Madsen, 1985).

historic and aesthetic value of the monument and is based on respect for the original material and authentic documents. It must stop at the point where conjecture begins, and in this case moreover any extra work which is indispensable must be distinct from the architectural composition and must bear a contemporary stamp. The restoration in any case must be preceded and followed by an archaeological and historical study of the monument (Article 9).

The valid contributions of all periods to the building or a monument must be respected, since unity of style is not the aim of a restoration. When a building includes the superimposed work of different periods, the revealing of the underlying state can only be justified on exceptional circumstances and when what is removed is of little interest and the material which is brought to light is of great historical, archaeological or aesthetic value, and its state of preservation good enough to justify the action. Evaluation of the importance of the elements involved and the decision as to what may be destroyed cannot rest solely on the individual in charge of the work (Article 11) (*Venice Charter*, in *Preserving Our Heritage*, pp. 14-15).

The *European Charter of the Architectural Heritage* expresses its view on the relation between the contemporary notions of preservation and restoration in terms of "integrated conservation"<sup>33</sup>, which "is achieved by the application of sensitive restoration techniques and the correct choice of appropriate functions" (*European Charter*, in *Preserving our Heritage*, p. 26).

The American Secretary of the Interior's standards focuses on the scope of rehabilitation practice which, as expounded, covers all main aspects involved in the preservationist practice nowadays. Thus, rehabilitation is defined as the "process of returning a property to a state of utility, through repair or alteration, which makes possible an efficient contemporary use while preserving those portions and features of the property which are significant to its historic, architectural, and cultural values" (*The Secretary of Interior Standards*, in *Preserving our Heritage*, p. 61). Both in the European Charter and the Secretary of Interior Standards, notable is the special dimension given to the preservation of buildings by putting them back to use.

American Standards also offers an interesting view of restoration as a preservationist method. The main idea, repeated continually when tackling each particular building component, is that the design for missing historic features "may be an accurate restoration using historical, pictorial and physical documentation; or be a new design that is compatible with the size, scale, material and color of the historic building."

The reason that *preservation* and *restoration* are so ambiguous is the degree of success of heritage protection. The relation between these two terms is comparable with the affinity, or discrepancy, between conservationist intentions (conservation being the ultimate aim) as an ultimate preservationist

<sup>&</sup>lt;sup>33</sup> The word "integrated" accentuates the need for integration of the architectural heritage into the context of people's lives. Quebec, in its *Deschambault Declaration* adopts a similar attitude. Its Article V-B says: "The development of cultural properties is of essential importance. This development includes all measures that serve to make them accessible and useful, and that, if necessary, make it possible to reintroduce them into the daily life of the people of Quebec" (*Deschambault Charter*, in *Preserving Our Heirtage*, pp. 44-48).

#### 1.2. Defining Architectural Preservation

essence and the achieved practical results. These results are never identical to the ideal objectives. They embrace reality with all its tangible (objective) and intangible (subjective) factors. This forces certain limits on preservation at the practical level, thus giving concrete shape to the notion of restoration.

Contemporary restoration has managed to eliminate much of its earlier destructive nature, principally that of the 19th century phase. A vital part of contemporary preservationist strategy is a sensible juxtaposition of the original and the new architectural elements. Though preservation is still the crucial concern, the interpolation of new architecture within the historic context is no longer a taboo.

# **1.3. Chapter 3: Historical Review of the Preservationist Practice in the 19<sup>th</sup> Century**



**Fig. 1. Old St. Paul's Cathedral, London** Employing present aesthetic and design criteria regarding the appropriate juxtaposition of new and historic architecture, the way in which Inigo Jones's classical Renaissance portico (1633-5) was "added confidently" to the front of the Gothic St. Paul's Cathedral, seems improper, awkward, and in stylistic conflict (Strike, p. 8) (Photo: Fawcett, 1976, p. 12)

#### 1.3.1. Introduction

The earliest events that spurred concern over architectural heritage and engendered a feeling of loss and thus a wish to restore, or at least to record the past, were the dissolution of 850 English monasteries between 1535 and 1539 and the Puritans' destruction of valuable buildings during Cromwell's Commonwealth of the 1650s, when decoration and religious images were removed from important churches and houses (Strike, p. 8).

An analysis of the Renaissance reveals numerous examples of interventions on medieval buildings which, if observed

from the present architectural point of view, seem quite problematic (Fig. 1). The Renaissance style was often freely mixed with Gothic<sup>34</sup> (Strike, p. 8), seemingly without much concern for an appropriate match between them.

The 18<sup>th</sup> century in Europe was characterised by a general lack of interest in religious matters. Neither did the public have any firm allegiance to a particular artistic or architectural style. Preference for the classical tradition over the European indigenous medieval tradition was endangering the Gothic heritage, considered barbarous and worthless in every sense. This led to the damage of many medieval buildings through uncontrolled alteration and demolition.<sup>35</sup>

<sup>&</sup>lt;sup>34</sup> This combination is not as prevalent in Italy. Without a strong Gothic tradition, Italy did not develop Gothic Revival to the same extent as other Western european countries where the Gothic style was standard. The consequence was that Italy remained outside the 19<sup>th</sup> century preservationist movement carried by the Gothic Revival, guided principally by England and France. Even today Italian attitudes have a distinctive character within the main international preservationist mainstream.

<sup>&</sup>lt;sup>35</sup> The religious heritage was damaged by "the ravings of fanaticism or the follies of church-wardens" (Scott, 1995, 400). Quoting the 1840's journal *The Ecclesiologist*, Tschudi-Madsen describes the precarious state of the religious buildings: "In one church a steam engine has been installed, in another a quarter of the nave had been turned into a school-classroom; at one place the Lady Chapel served as a prison, at another a common footpath went through the church; in one church the east window has been removed [...]" (Tshudi-Madsen, 1976, p. 32).

The long neglected Western European architectural heritage began to receive attention in the late 18<sup>th</sup> century, thanks to Romanticism and renewed historic and archaeological interest in the Medieval Age, inspiring a feeling of nostalgia and admiration for this period.<sup>36</sup> Interest was manifested in both new construction and restoration of existing buildings.

The strongest architectural influence in medieval Western Europe was Gothic, hence Gothic architecture was one of the most important, as well as largest, segments of its built heritage. It is within the Gothic Revival, which combined architectural, religious, moral, national and other concerns of the moment in Western European countries that the great debate over preservationist philosophy took place during the 19<sup>th</sup> century.

Restoration practice was the embodiment of the Gothic Revival; the best expression of its motivations and principles. It began wherever the Gothic Revival took root, laying the foundation for modern preservationist theory. It was especially strong in England and France, and to a lesser extent in Germany and other Western and Central European countries.<sup>37</sup> In France and Germany the process began a few decades later than in England mainly due to political factors: the French Revolution and the constant wars among the German states, respectively.

#### 1.3.2. Restoration practice in 19<sup>th</sup>-century Western Europe

Throughout most of the 19<sup>th</sup> century, practically all activities dealing with old buildings were covered by the term *restoration*. In 1755, Samuel Johnson defined "restoration" in his *Dictionary of English Language* as: "The act of replacing in a former state". Almost literally executed in practice, this definition expresses quite well the essence of the 19<sup>th</sup> century restoration campaign. In his *Restoration and Anti-Restoration* (1975), Tschudi-Madsen described 19<sup>th</sup> century restoration as "a form of repair which was unconcerned with historical congruence of style" (Tschudi-Madsen, 1976, p. 23). These statements concern the period until the 1870s and summarise the relation between the genuine intention to repair and restore the former grandeur of damaged heritage buildings and the effacing of their historicity through either unselective elimination of the original features or unjustifiable addition of new ones.

The early restoration practice lacked the support of valid experience or theoretical background, and it was practically reduced to arbitrary interpretation of historic styles. Such a situation permitted "every architect [to have] a theory of his own, a beau ideal that he has himself created" (Pugin, 1843, p.

<sup>&</sup>lt;sup>36</sup> The interest in the so-called Picturesque, aesthetic ideal unconditionally accepted as attractive and fashionable, revived medieval values. The Picturesque was emphasised in literature, paintings, and theatre. Regarding its impact on architecture, it explored the romantic aspects of medieval times through the depiction of derelict medieval buildings, spurring a revival of interest in Gothic buildings.

<sup>&</sup>lt;sup>37</sup> In Italy, with the rare exceptions of the facades of cathedrals in Milan (1806-13), Florence (1867-87) (also the church of Santa Croce in Florence (1857-63)), and Naples (1876-1907), Gothic Revival never flourished. Spain and Portugal did not develop Gothic Revival attitudes until the mid-19<sup>th</sup> century when some attempts to form a national style, mainly under the influence of Viollet-Le-Duc, took place in Catalonia. Antonio Gaudi was the most important contributor from 1870 onwards. Worth mentioning are his restoration of the Gothic cathedral in Palma on the island of Mallorca (1904-14) and the Gothic interpretation implicit in the extremely personal style of all his work (*The History of Western Architecture*, Gothic Revival).

B), resulting in a number of conceptual variations.

The main aim of the restorers was to arrest further decay—a motive fully justified by the precarious state of long-neglected medieval architecture. The result was that buildings received proper attention and were protected from almost all past causes of physical damage. However, restoration in general went further than eliminating the effects of physical decay and neglect. When architectural zeal led interventions to go as far as altering the original elements or arbitrarily completing originally unfinished buildings, the intended protection actually became heritage destruction.

The principal restoration strategies were either to restore buildings to their original state (from the moment of their conception), or to complete them in accordance with either the buildings' original plans, when available, as in case of the Cologne Cathedral, or with some particular period of Gothic style—in accord with the individual restorer's preferences. Often, architects ignored all this and simply pursued the restoration work in accordance with their own vision (sometimes under the pretext of assuming the intentions of the original designer). Most frequently, the intention was to achieve a so-called "unité de style." <sup>38</sup>

Thus subjected to the whims of restorers, some buildings were entirely transformed. Original sculptures, building materials and surfaces, worn by age and use, were redone to give them a completely new appearance. As a result, the historic dimension of the original architecture was erased—the original craftsmanship and patina could not be reproduced. Additions and alterations accreted over time and testimonies of the buildings' past were destroyed or damaged in an effort to restore them according to the style of selected older parts. New additions, built in the same style as the original building, were disguised to appear as if they belonged to a past period.

The result was a complete confusion between new and old, making it impossible to distinguish which element belonged to which period. The entire history of buildings was either obfuscated or totally erased to create something without rapport to any period—either the buildings' past or the restorer's own time. This practice went on until the 1870s, involving a large number of buildings throughout Europe, especially in England, and caused irreparable damage, especially to the religious heritage architecture.

Different political, historical and philosophical realities led to different architectural and preservationist practices. All countries emphasized the national component of Gothic architecture as an indigenous style born on their soil, but their motives were not always the same.

For England, which felt directly threatened by revolutionist ideas emanating from France, building new churches and restoring the ecclesiastical architectural heritage was a focal point of the religious revival. Resuscitated Gothic values helped to consolidate and strengthen national identity.

<sup>&</sup>lt;sup>38</sup> "The dominating idea through the second half of the 19<sup>th</sup> century was to be the principle of *l'unité de style*—unity and conformity of the stylistic expression of the monument—without consideration of the different periods" (Tschudi-Madsen, 1985).

Arguments for the protection of France's religious heritage, which was initially endangered by anti-aristocratic and anti-clerical attitudes during and in the aftermath of the French Revolution, were eventually redeployed in favour of national homogenization, but the perspective differed from that of England. France, with the ideology of the French Revolution, stressed the national character of its architectural heritage and the affinity with medieval values.

Gothic revival in Germany, the third strongest national movement, was kept vital primarily through the restoration of Cologne Cathedral, but also through the construction of the Lutheran Nikolaikirche in Hamburg (1845-63) and the Munich Town Hall (1867-1909). However, there were not enough important projects to warrant the view that the movement made great architectural contributions<sup>39</sup> (*The History of Western Architecture*, Germany). For this reason, the main emphasis of this chapter will be on England and France.

#### 1.3.2.1. England

When the public became aware of the damage, it was already too late for a significant number of badly restored buildings. The first influential voice for a different restoration attitude was the British architect, theorist and critic Augustus Welby Northmore Pugin.<sup>40</sup> Pugin was a stern critic of restoration practice as it was at the end of the eighteenth and first decades of the nineteenth centuries: "In fine, whenever we go, we find that whether the buildings have been treated with neglect, or attempted to be improved, both results are disastrous in the extreme" (Pugin, 1969, p. 38). He was especially critical of James Wyatt (1746-1813),<sup>41</sup> who restored a number of medieval churches in the last twelve years of the 18th century.

<sup>&</sup>lt;sup>39</sup> In Germany Gothic was not only considered a universally applicable style but as a way of life, around which all essential aspects of the society were focused (Kenneth, 1928, p. 152). Gothic was considered an expression of German Catholic identity. In his pamphlet *Von deutcher Baukunst* (1772) about the cathedral at Strasbourg, Goethe claimed that Gothic was the embodiment of the German spirit. Through the centuries, Cologne Cathedral and the entire medieval German heritage were an emotional and traditional affair, deeply concerned with *theology* and far removed from the studied and analytical interest of the French (*The History of Western Architecture*, Germany).

The German Gothic Revival was born with the work carried out on Cologne Cathedral and together with Strasbourg Cathedral, it became the focus of German Gothic Revival and German restoration practice. Original medieval plans for the cathedral were available, and restoration of the building lasted from 1842 until its consecration in 1880. As in France, the preferred Gothic period in Germany was the latter half of the 13<sup>th</sup> century—also the style of Cologne Cathedral. Unlike in England, though, the German movement remained uncoordinated due to the more complicated political climate (*The History of Western Architecture*, Germany; and David-Sirocko, 1998).

<sup>&</sup>lt;sup>40</sup> Pugin heavily influenced the formation of the Gothic Revival in England, introducing moral and religious components. In his 1836 book *Contrasts* (Pugin, 1969), he claimed that architecture is a reflection of society at a given moment. Reinforcing the position already developed by Romanticism at the end of the 18th century—that the society of the Middle Ages was good—he tried to prove that Gothic architecture was the best among past styles and an appropriate functional, constructional, and moral choice.

Underlining its theological dimension, as well as the ethical and moral qualities of Gothic architecture, Pugin's theory, beside in England, had also a particularly strong effect in Germany (David-Sirocko, p. 162). In tradition with 18<sup>th</sup> century French interest in the rational and functional aspect of Gothic, Pugin argued for functionality through his principle of "True Picturesque". Although often resulting in an unprincipled mixture of decorative and structural elements (David-Sirocko, 1998), this concept, according to which medieval cottages and country houses were functional—therefore real Picturesque had to possess this dimension—was especially popular in Germany: "If our present domestic buildings were only designed in accordance with their actual purposes, they would appear equally picturesque with the old ones" (Pugin, *An Apology*, 1843, p. 39; see also Crook, *The Dilemma of Style*, 1987, p. 32).

<sup>&</sup>lt;sup>1</sup> Although a highly regarded architect, James Wyatt the "Palladio of England" (Null, 1985, p. 27) received harsh





He objected mainly to Wyatt's interventions on decayed facades and false restorations.<sup>42</sup>

Pugin's True Principles of Pointed or Christian Architecture (1841) sought to define a theoretical foundation for an architectural style suited to the Victorian era. It offered, for the first time, clearly defined principles of the Gothic Revival, propagating Gothic as the only appropriate style for English ecclesiastical architecture. According to him, design should be based on the highest moral standards which, besides being deeply religious reasoning, called for the design of architectural elements honestly expressing their function and construction technique. 43

The Cambridge Camden Society, founded in 1839, was Pugin's main ally. Their journal, *The Ecclesiologist*, clearly defined the restoration principles and intentions in its 1842 issue:

**Fig. 2. St. Alban's Cathedral** The west front of St Albans Cathedral before (upper) and after restoration (below) by Lord Grimthorpe (Photos: Fawcett, 1976, p. 12)

criticism even from the beginning of his restoration practice on the Litchfield Cathedral in 1788. Besides the Cathedral in Litchfield, he worked on Hereford, Salisbury, and Durham Cathedrals.

<sup>42</sup> An illustration of the degree of the 19<sup>th</sup> century difference of opinion on appropriate restoration is given in Pugin's comment on Wyatt's work at Hereford Cathedral,: "Horror, dismay, the villain Wyatt had been there... Need I say more? No! All that is vile, cunning and rascally is included in the term Wyatt" (Ferrey, 1861, p. 80; qtd. in Tschudi-Madsen, 1976, p. 29).

<sup>43</sup> These ideals reflected the spirit of 18th century France and are part of the French influence in Pugin's background. (his father Augustus Charles Pugin, author of *Specimens of Gothic Architecture* (1821), was a French refugee). They were for the first time directly introduced to British architects by Pugin, and left an impression on later English achievements—including John Ruskin who, although from a different position, highlighted even more the moral dimension—especially the importance of the high professional standards (*The History of Western Architecture*, Great Britain).
We must, whether from existing evidences or from supposition, recover the original scheme of the edifice as conceived by the first builder, or as begun by him and developed by his immediate successors... (*Ecclesiologist*, I, 1842, p. 65). To restore is to revive the original appearance ... lost by decay, accident, or ill-judged alteration.<sup>44</sup>

Pugin's orientation towards antiquity differed from the French scientific approach, with its predilection for innovation and orientation towards the future. In an 1840 letter, at the peak of his career, he revealed his primary intention: "I seek antiquity and not novelty. I strive to revive not to invent" (Phoebe, p. II).

The other two most important participants in the restoration debate from 1840s onward were architect Gilbert Scott<sup>45</sup> and philosopher-writer John Ruskin. Scott's ideas were that the old building is an historical document and additions are part of this document, that there is a danger that ephemeral needs may endanger the heritage values, and that "as a rule 'conservativism' should be the great object—the very key-note of Restoration".<sup>46</sup> In his 1848 lecture titled "A plea for the Faithful Restoration of our Ancient Churches", he opposed the Camden society by criticising the obliteration of alterations implemented during the lives of building and reducing churches to their "ancient uniformity of style":

These varieties are indeed most valuable, as being the standing history of the edifice, from which the date of every alteration and repair may be read as clearly as if it had been verbally recorded; and in many cases the latter additions are valuable specimens of architecture as the remains of the original structure and merit an equally careful preservation (Scott, 1850, p. 21).

The debate took a significant turn in 1849, with John Ruskin's *The Seven Lamps of Architecture*. Ruskin was categorically against restoration:

Neither by the public, nor by those who have the care of public documents, is the true meaning of the word restoration understood. It means the most total destruction which a building can suffer: a destruction out of which no remnants can be gathered: a destruction accompanied with the false description of the thing destroyed. Do not let us deceive ourselves in this important matter; it is impossible, as impossible as to raise the dead, to restore anything that has ever been great or beautiful in architecture (Ruskin, 1880, p. 199).

For Ruskin preservation was a dishonest act. His recommendation was to "pull the building down, throw its stones into neglected corners ... but do it honestly and do not set up a lie in their place" (Ruskin, 1910, p. 200). He further advised: "Take proper care of the monuments, and you will not need to restore them" (Ruskin, 1910, p. 201).

<sup>&</sup>lt;sup>44</sup> The Ecclesiologist, I. 1842, pp. 65-70 (qtd. in Fawcett, p. 42).

<sup>&</sup>lt;sup>45</sup> Architect Gilbert Scott was the main promoter of Gothic Revival and restoration practice during the Victorian Era. Besides an enormous number of new buildings, he executed in the course of his career, starting with the 1841 restoration of the church of St. Mary in Stafford (Fig. 2), more than two hundred restoration projects—mainly churches. He occupied the unusual position of being on both sides of the debate; his theoretical ideas at this point were very close to Ruskin's philosophy, being opposed to the destructive aspect of restoration practice, but his work did not match them and became an object of strong criticism in the 1870s (Null, 1985, p. 29).

<sup>&</sup>lt;sup>46</sup> Scott, G. G. A Plea for the Faithful Restoration of our Ancient Churches, London, 1850, p. 21 (qtd. in Tschudi-Madsen, 1976, p. 54).

# 1.3. Historical Review of the Preservationist Practice in the 19th Century

Nevertheless restoration, as before, implacably transfigured English Gothic architecture, altering thousands of medieval churches in England and Wales between 1840 and 1875. It disregarded Ruskin's philosophy, which, although widely approved, did not significantly change the nature of the practice (Miele, 1996).

Ruskin's convictions were for the first time given more practical expression through the *Manifesto* of the Society for the Protection of Ancient Buildings (SPAB), founded by William Morris in 1877. In accordance with the general critique of the ongoing preservationist practice, Morris wrote in the *Manifesto* that during the 50 years period preceding 1877 more damage was inflicted on ancient buildings than during "all the foregoing centuries of revolution, violence and contempt" (SPAB *Manifesto*, in Morris, 1996, pp. 52-53). SPAB joined the general, mainly ineffective, critique but also managed to put into practice some of the principles stated in its manifesto.

The last quarter of the 19<sup>th</sup> century was a period of growing interest in historic heritage, with the increasing concentration of branches of science and thought. Contributing to the restoration debate, SPAB also attempted to define the principles of restoration. The *Manifesto* declared that the aim of the Society was to prevent the restoration from returning a building to the condition at the "best" time of its history. The *Manifesto* was against the elimination of certain building features and the reconstruction of others according to an architect's personal interpretation of the essence of the original style or the original architect's intentions. Furthermore, it proposed to put an end to destruction and falsification through the alteration of buildings during restoration, and to promote honest repair in the sense that Ruskin intended:

It is for all these buildings, therefore, of all times and styles, that we plead, and call upon those who have to deal with them to put Protection in the place of Restoration, to stave off decay by daily care, to prop a perilous wall and mend a leaky roof by such means as are obviously meant for support or covering, and show no pretence of other art, and otherwise to resist all tampering with either the fabric or ornament of the building as it stands; if it has become inconvenient for its present use, to raise another building rather than alter or enlarge the old one; in fine to treat our ancient buildings as monuments of bygone art, created by bygone manners, that modern art cannot meddle with without destroying....Thus and thus only, shall we escape the reproach of our learning being turned into a snare to us; thus and thus only can we protect our ancient buildings, and hand them down instructive and venerable to those that come after us (*SPAB Manifesto*, in Morris, pp. 54-55).<sup>47</sup>

The SPAB's chief importance lay in its ability to create a wide public reaction and to establish a basis for preservationist activity in England. In an address to the first annual General Meeting of SPAB, Morris said that SPAB's purpose was "turning public attention to the intrinsic value of our ancient buildings, and the grievous loss we incur by their destruction, and of teaching how much that value, both artistic and

<sup>&</sup>lt;sup>47</sup> Although still at the core of preservationist theory, these attitudes have significantly evolved since 1877: today we readily accept additions, alterations and new architecture insertions, often necessary when adapting buildings for new uses. However, being aware of past mistakes, we now seek ways to protect historicity and heritage identity.

historical, depends on their being preserved in a genuine condition."<sup>48</sup>

The general belief is that towards the end of the 19<sup>th</sup> century SPAB had directly provoked and symbolized discontent with the destruction of English historical heritage. However, considering the wider context of British society, historian Martin Wiener has advanced the thesis that this discontent was in great part fuelled by a nostalgic wish to retreat to a rural, pre-industrial time, in the wake of general disaffection at the end of the Victorian era (Wiener, 1981, p. 69).<sup>49</sup> Whatever the causes, SPAB's *Manifesto* marked a turning point in a century-long restoration tradition. It is one of the most important 19<sup>th</sup> century documents that facilitated the application of Ruskin's ideas and played a crucial role in the formation of current preservationist philosophy.

#### 1.3.2.2. France

The ideals of the French Revolution were not in tune with architects' preference for Gothic architecture.<sup>50</sup> While they appreciated the honest and economic aspects of the Gothic style, the revolutionaries considered it a reactionary symbol of the church and the aristocracy. After the revolution, the medieval religious heritage was confiscated by the state, whose negligence led to its widespread deterioration. It wasn't until the 1830s, over 40 years after the revolution, that the restoration campaign was initiated. French antiquarians, writers, and painters were first to initiate a nationwide attempt to have the architectural heritage returned to its former splendour and to erect new buildings in keeping with the Gothic Revival.<sup>51</sup>

The impetus for the Gothic Revival began to build in 1831, after Victor Hugo supported it with his novel *Notre-Dame de Paris*. In the preface, he explained that his aim was to promote Gothic as the national style: "Inspirons, s'il est possible, à la nation l'amour de l'architecture nationale. C'est là, l'auteur le déclare, un des buts principaux de ce livre ; c'est là un des buts principaux de sa vie" (Hugo, p. 12). He encouraged the preservation of ancient monuments and acceptance of the Gothic style until the eventual emergence of a new style in harmony with the modern French society.<sup>52</sup>

<sup>&</sup>lt;sup>48</sup> Address to the First Annual Meeting of the SPAB (1878) (Morris, 1996, p. 57).

<sup>&</sup>lt;sup>49</sup> "Preservationism carried with it two intertwined attitudes that link the movement to broader currents in late-Victorian culture and society. First, a loss of confidence in the creative powers of one's contemporaries and an elevation of the past over the present; and second, a highly critical view of industrial capitalism and its "materialistic" ethos. Many of those activities that roused the ire of preservationists were not in fact activities of restoration, but of modernization" (Wiener, 1981, p. 69).

There is a strong parallel with the disappointment with Modern architecture and post-WWII development, whose negative environmental and social repercussions incited the rise of 20<sup>th</sup> century architectural preservation. <sup>50</sup> As in most parts of Europe, medieval tradition survived with the help of troubadours, but the greatest influence in the

<sup>&</sup>lt;sup>50</sup> As in most parts of Europe, medieval tradition survived with the help of troubadours, but the greatest influence in the revival of medieval spirit came from England in the last quarter of the 18<sup>th</sup> century. The catalyst for the French revival was the popularisation of landscape painting depicting medieval motives and the architectural influence of English rock gardens and mock-Gothic pavilions. The French Gothic Revival insisted on the truthful expression of forms and features according to their construction and purpose—a heritage of 18<sup>th</sup> century French architectural thought (*The History of Western Architecture*, France).

<sup>&</sup>lt;sup>51</sup> The movement concretised in 1837 with the establishment of the Commission for Historical Monuments which consisted of architects and archaeologists (Boucher-Rivalain, 1998).

<sup>&</sup>lt;sup>52</sup> Hugo makes a connection between the thirteenth century, when the theocratic feudal state was replaced by a more democratic society, and the victory of the French revolution. Since the architecture of the 13<sup>th</sup> century was Gothic, he concludes that it is symbolic of a positive change in French society and appropriate for the newly emancipated post-revolution France. After

# 1.3. Historical Review of the Preservationist Practice in the 19th Century

Viollet-le Duc summed up his argument in favour of Gothic in an 1846 article in *Annales*, clearly showing how markedly different his values were from the religiously grounded postulates of the English Gothic Revival:

The French architecture of the Thirteenth century, born on our soil, created according to our character and with our materials, in our climate, beautiful, admirable in design and economical, is the only one that deserves to be studied in France considering first construction, secondly art and thirdly cost. <sup>53</sup> (Violet-le-Duc, 1876)

Viollet-le-Duc's biggest contribution is in his theoretical work,<sup>54</sup> which greatly influenced 19th century French architecture through its engagement in search of a new French architectural style.<sup>55</sup> Restoration methods established by Viollet-le-Duc became the French national approach, but in fact exercised much wider international influence. His main intent "was neither to bring a building back to the end of its living evolution... nor to restore it to a pristine of its original twelfth-century design." Rather it was "to reestablish it in a complete condition that may never have existed at any given moment." He is also conscious that "It is only from the second quarter of our century that attempts have been made to restore the edifices of another age, and we do not know if architectonic restoration has been clearly defined." <sup>56</sup>

thus disposing of the argument that Gothic symbolised institutions and oppressive social groups, he then attempted to point out the difference between French Gothic and Gothic in other European countries which glorified the power of the church and alienated the people: "Imposible de placer notre cathédrale dans cette autre famille d'églises hautes, aériennes, riches de vitraux et de sculptures; aiguës de formes, hardies d'attitudes; communales et bourgeoises comme symboles politiques, libres, capricieuses, effrenées, comme oeuvre d'art; [...]" (Hugo, p. 170).

<sup>&</sup>lt;sup>53</sup> Violet-le-Duc, E. 1876. "De la construction des édifices religieux en France depuis le commencement du christianisme jusqu'au XIXème," Annales Archéologiques 4, pp. 69-77 (qtd. in Boucher-Rivalain, p. 150). Two journals, Revue Generale de l'Archuteture et des Travaux Publics, founded in 1840 by architect César Daly, and Annales Archéologiques, founded by A. N. Didron in 1844, although different, were united against the classically oriented Académie Royale des Beaux Arts, which was accused of neglecting and mutilating architectural monuments. Revue was oriented towards the constructional aspect and possible applications to architecture of the current innovations in civil engineering. Its attitude was that new construction methods were the key for a "new architecture". Annales was interested in archaeology and antiquarianism, and was the main promoter of the Gothic Revival (Boucher-Rivalain, p. 150).

<sup>&</sup>lt;sup>54</sup> Strongly influenced by 18<sup>th</sup>-century French Neoclassical tradition, his work is imbued with Renaissance values. Although his practical work and especially the controversial restoration of Notre-Dame de Paris made him famous, many critics feel that his practical work did not meet his own principles as expounded in his *Dictionnaire raisonné de l'architecture française* (1854-68) and the *Dictionnaire raisonné du mobilier française* (1857-75), where he constructed an intellectual argument to justify preference for the Gothic style.

<sup>&</sup>lt;sup>55</sup> Regardless of the questionable success of the Viollet-Le-Duc's built work, his attitude, like that which prevailed throughout France, led to many positive achievements which affected the Gothic Revival all over Europe. Although France did not develop a Gothic revival on the same scale as England, the French Gothic Revival is given substantial credit for its attempts to conceive the new architectural style based on belief in prosperity, reliance on technology, and orientation towards the future. It was supposed to adapt rational, constructional and compositional components of the Gothic style to the 19<sup>th</sup> century reality, resulting in the creation of original forms and details. Although the expectation of establishing a new French style was not fulfilled, the French Gothic Revival influenced subsequent architectural development by setting the groundwork for the Modern movement born in the 20<sup>th</sup> century.

<sup>&</sup>lt;sup>56</sup> Viollet-le-Duc, Dictionnaire raisonné, VIII, p. 14 (qtd. in Hearn, 1990, p. 6).

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Even though Viollet-le-Duc's restoration of Notre-Dame de Paris was officially proclaimed to represent the final victory of the Gothic Revival, the Academie Royale des Beaux-Arts continued adhering strictly to classical ideals and never relented its opposition. Its restraining influence delayed full development of the French Gothic Revival until the 1850s<sup>57</sup> and never allowed it to bloom as it did in England. Another reason why neither the French Gothic Revival nor its restoration campaign had the same intensity and coherence of their English counterparts is the dichotomy in the French concept. While heavily oriented towards the past, as evinced by the restoration works done from 1830 onwards, architects were simultaneously striving to mould Gothic into a new style, reflecting society's desire for progress following the upheaval of the French Revolution.

Fig. 3. La Madeleine Church in Vézelay Above – The west facade in 1840. Watercolour by E. E. Viollet-le-Duc (Photo: *Les Monuments Historiques de la France*, 1970, no. 3, p. 19; rpt. in Denslagen, p. 128) Bellow – After the restoration (Photo: *Les Monuments Historiques de la France*, 1965, p. 39; rpt. in Denslagen, p. 29)

<sup>&</sup>lt;sup>57</sup> After a long dispute with academics in the Council of Civil Buildings, Adolphe-Napoléon Didron, editor of the *Annales archéologiques* and one of the strongest propagandists of the Gothic Revival, declared the triumph of Gothic in 1852. He estimated that 200 neo-Gothic churches had been built or were in the process of construction (*The History of Western Architecture*, Gothic Revival, France).

#### 1.4.1. Introduction

Although more than 120 years old, the principles enunciated in the SPAB *Manifesto*, which put the finishing touch on 19<sup>th</sup> century preservationist developments and set the groundwork for a twentieth-century theory of preservation, are generally still viable and applicable. However, 20<sup>th</sup> century issues proved to be more complex and varied and it was therefore necessary to adopt a series of similar documents—the most important being the *Athens Charter* (1933) and the *Venice Charter* (1964).

So what were the 20<sup>th</sup> century conditions that set it apart from the 19<sup>th</sup> century reality and that, directly or indirectly, influenced the formation of the actual preservationist field and are of a particular relevance to contemporary adaptive use?

By the 1960s, the tremendous post-WWII transformation of the human environment finally attracted the attention of architectural and preservationist theorists. The energetic architectural debate that started at that time recognized the negative repercussions of such practice, bringing to light more than ever the crucial dilemma regarding the protection of the existing built context and appropriate introduction of new architecture.

As a result of revived interest in traditional pre-modernist architectural methods, theoretical works on contextualism appeared in both Europe and North America in 1960s and 1970s, anticipating a debate on the appropriate juxtaposition of old and new architecture—the design orientation which epitomizes the essence of present day architectural and preservationist practice.

The issues of environmental change and stability received special attention, and for the first time, serious research into the reasons for building obsolescence was undertaken, focusing on the capacity of flexibility and adaptability to prevent obsolescence. Adaptable design proved not only an effective tool in fighting obsolescence, but also one of the most important requirements for successfully changing the original building use. The paradox was that flexibility—in other words, capacity for change—revealed itself as one of the conditions and prerequisites for the stability of the building environment.

#### 1.4.2. Stability and Change

The past as embodied in the architectural heritage provides the sort of environment indispensable to a balanced and complete life.

In the face of a rapidly changing civilization, in which brilliant successes are accompanied by grave perils, people today have an instinctive feeling for the value of this heritage.

This heritage should be passed on to future generations in its authentic state and in all its variety as an essential part of the memory of the human race. Otherwise, part of man's awareness of his own continuity will be destroyed." (*European Charter*, Article 2)

Since the earliest civilisations, buildings have been perceived as symbols of stability and constancy. Modern development interrupted the natural dynamic, established over the centuries, of gradual change in the built environment—an optimal equilibrium between change and stability intuitively defined by people seeking a sense of continuity.

While people naturally desire a certain degree of change in their environment to avoid monotony, too much change causes stress. The desire for change is balanced by the need for stability, not in the sense of fixedness but rather of the perceived impression of continuity while undergoing changes. The degree of stability should ideally be in accord with the optimum rate of change defined by Rappoport and Cantor as the *optimum perceptual rate* (Rappoport and Cantor, 1967; Aylward, 1979). In short, what we need is a constantly renewing city with active natural relationships within it, with human presence and human environment.<sup>58</sup>

The demolitionist approach of the post-WWII period, best illustrated by the North American phenomenon of so-called "urban renewal", was detrimental to both the physical and the social structures of cities. While nearly entire population and their activities moved to suburbs, the existing urban fabric was seriously damaged through an unprecedented demolition/construction campaign and the introduction of new highways and parking lots, brutally disrupting the existing built fabric. Such a practice was the main impetus for the introduction of issues of change and stability into the architectural discussion of the early sixties that helped spur interest in architectural preservation, and led to a call for the revival of traditional design and building strategies.

The degree of change after WWII was much higher than optimum. Following the logic behind the optimal perceptual rate, the reason at the root of the frenetic North American demolition/new construction campaign may be found in the prolonged period of monotony prior to WWII—an excessively static built environment gave rise to the desire for extensive change. Today, after several decades of revitalization and preservation efforts, it may be said that never since the inception of modernism have many of our cities, especially their central parts, been closer to the ideal of the *optimum perceptual rate*.

#### 1.4.3. Building Obsolescence

Before the Industrial Revolution, except in cases of war or natural catastrophe, the alteration of the manmade environment was gradual, noticeable only over long periods. The main concern was physical obsolescence. However, this changed with the inception of the Industrial Age. Like any other commodity

<sup>&</sup>lt;sup>58</sup> Important authors have analysed the topic of stability and the interrelation between the fluidity of the human environment and human identity and existence. Bachelard expands on the notion of home as the best expression of the human need for stability: "A house consists of a body of images that give mankind proofs or illusions of stability" (Bachelard, p. 17). In his *Supports*, Habraken accentuates the mutability or anti-static component of the built environment as a result of its tight interrelation with the constant human presence and activity that result in the mutual conditioning of their characters and identities: "A town is a unique phenomenon which grows and flowers in an eternal cycle; a phenomenon in which matter assumes something of the mobility of life, and life receives something of the eternal quality of matter" (Habraken, p. 29).

in capitalist market competition, buildings began to be treated as disposable assets. This induced the phenomenon of functional obsolescence, which exacerbated especially in the 20<sup>th</sup> century due to technological and sociological changes that were occurring at a faster pace than physical structures were decaying.<sup>59</sup>

This is especially true in the case of industrial buildings. Until the Second World War, factories were incorporated within the fabric of the inner city, thus profiting from the proximity of the workforce and the sharing of urban services. After WWII, capital moved out of the city to regions where taxes and labour costs were lower, causing the dislocation of the inner-city industries to new exclusively designated areas in the suburbs, leaving behind many obsolete factories and warehouses.

Dwindling numbers of urban residents caused the closure of many academic and religious institutions, relegating to dereliction many schools, churches, monasteries and convents. These obsolete buildings, usually occupying the most valuable locations, were the first to be torn down.

Although the topic of building obsolescence has been debated since the early 20<sup>th</sup> century, it was not until the 1960s that significant attention was paid to the problems connected with it. For the first time change of use was considered as an effective method to cope with building obsolescence (Cowan, 1965), and new buildings were designed to obviate their future obsolescence.

Besides physical and functional reasons, presumably, there is also another set of factors causing obsolescence that is of particular interest to this study. They can be defined as "psychological"<sup>60</sup> motives and are connected to changes in aesthetic and stylistic values.<sup>61</sup> Changes in the notion of what constituted a desirable lifestyle made inner cities lose their attraction in the period after the Second World War and this, coupled with technological advances in transportation and in industrial production, favoured the development of suburbs. However, after decades of uncontested popularity, the suburban lifestyle is currently losing its attractiveness. Whether as a cause or a consequence of the advantages of inner city

<sup>&</sup>lt;sup>59</sup> According to Cowan, one of the earliest efforts to define the causes for 20<sup>th</sup> century obsolescence is given in the US Department of the Treasury's set of rules (1947) concerning the depreciation of real property. It stated that building obsolescence is result of "revolutionary or radical changes unforeseen and unpredictable by their nature when the property was acquired." The rules further claimed that, "The useful life of the buildings depends to a large extent on the suitability of the structure to its use and location, its architectural quality, the rate of change of population, the shifting of land values, as well as the extent of maintenance and rehabilitations" (Cowan, 1965).

<sup>&</sup>lt;sup>60</sup> Based on the late-1950s analysis of the interaction between the users and buildings that employed concepts from psychology, Goffman (1959) claims that much human activity takes the form of role-playing, and that the users' satisfaction might depend more on psychological factors than the adequacy of the design in general. Such reasoning points to the psychological "role-playing" aspect of loft-living as a crucial factor behind the popularization of this housing type—one that still significantly influences user satisfaction with the overall design in contemporary adaptive-use projects.

Simard (1981) employs the term *obsolescence psychologique* in the context of the modern preoccupation with newness spurred by the media. There is often a need to refurbish even recently erected buildings, due to the fast changing stylistic requirements that render them obsolete or less competitive. Some good examples are the 1970s office buildings which, together with the change in user requirements and outdated technical services (insulation, ventilation, cabling), have become practically obsolete today.

<sup>&</sup>lt;sup>61</sup> In 1949, Ratcliff (1949) described obsolescence "as a purely relative matter" which depends "upon the changes in taste, fashion, design, material and equipment" (Cowan, 1965). Lowry (1960) similarly suggests "that style and technological obsolescence *but not deterioration* cause high-income groups to insist on *new* housing" (Cowan, 1965).

living, the appeal of living in adapted old buildings is on the rise.

We are presently witnesses to the revitalization of central city areas and the rise of new housing concepts linked to adaptive use. While formerly obsolete inner city buildings, in part thanks to the change of lifestyle preferences and tastes, are being put back in use the suburban home is consequently in a situation of potential obsolescence, both physically and as a post WWII ideal.<sup>62</sup>

#### 1.4.4. Flexibility (Adaptability)

In the 20<sup>th</sup> century, especially the latter half, rapidly changing users' needs and the narrowness of design were diagnosed as the principal cause of building obsolescence, introducing the issue of design flexibility. Londberg-Holm (1933) hypothesized that physical deterioration occurs more slowly than the various forms of functional obsolescence, blaming inflexible planning for the great deal of obsolescence.<sup>63</sup> In the 1930s, as attention turned to the problem of blight, Mumford (1938) defined blighted areas "as those chronically unable to pay their share of the municipal services essential to their existence [...] nor, by reason of [their] economic status, pay for [their] own internal renovation and repair" (Cowan, 1965). Like Londberg-Holm, he sees the solution in "flexible" or "adaptable construction" which allows changes in function to be accommodated within a structure that changes with new demands (Lonberg-Holm, 1933).

Architects and planners embarked upon the search for a way to deal with unspecified future change or to produce flexible building designs which were more responsive to change and therefore more functional—that is, have a longer functional life. Expanding on the notion of 'renewability'<sup>64</sup> Mumford talks of the advantages of the steel framed building which allows the partitions to be freely recast according to the users' needs. He mentions the example of Mies van der Rohe's steel-framed Berlin apartment houses, built in such a way that the number and size of the rooms could be changed at will (Mumford, p. 444).

Not all efforts went in the same direction. Louis Kahn and Buckminster Fuller represented two diametrically opposed attitudes towards flexibility in design. Lois Kahn based his design on the search for static values that unerringly define a building's nature: "Somewhere in the realm of all building form throughout history and over all societies is a thing that is unchangingly called school" (Farell, 1979).

<sup>&</sup>lt;sup>62</sup> In a similar context, Lowry (1960) suggests that after the adoption of a new residential style, and the change of living location according to the new preference, old dwellings belonging to high income groups "enter the housing market, create an excess of supply over demand, and depress prices. In the *rent* market this results in a lower level of maintenance. Thus style and technological obsolescence start the cycle, and depreciation keeps it going" (Cowan, 1965).

 <sup>&</sup>lt;sup>63</sup> Lonberg-Holm (1933) diagnoses the blight as a factor of growth and obsolescence as "the exhaustion of the usefulness of the equipment"; he sees the solution to be "harmonising the growth process through moving or scrapping the equipment" (Cowan, 1965).
<sup>64</sup> "Renewability in architecture does not mean designing buildings that must collapse in fifteen years: still less does it

<sup>&</sup>lt;sup>b4</sup> "Renewability in architecture does not mean designing buildings that must collapse in fifteen years: still less does it mean making pre-fabricated houses whose superficial shape will undergo as many ephemeral and foolish style-changes as the motor car, merely in order to quicken the pace of style-obsolescence and keep the industry profitability occupied. Renewability means the design of buildings in such materials, and by such technological methods, that they may easily made over, section by section, structure by structure, even neighbourhood by neighbourhood" (Mumford, p. 444).

Buckminster Fuller was at the forefront of architects who believed that, with the aid of technology, it is possible to create spaces that have universal use—therefore, ultimately flexible. His ideas found their best expression in his Geodesic Dome and its open and entirely undefined interior space.

Nevertheless, the two main assumptions regarding obsolescence were that it could be counteracted by either shortening a building's physical life to match its useful duration or prolonging its useful life through adaptable or flexible design<sup>65</sup> which would enable a building to change physically in order to accommodate evolving demand and facilitate changing of its original use. The first strategy is based on the employment of modern technology and non-traditional materials that are less durable than traditional ones, and that would be simply discarded after the end of either their useful or physical life (so-called built-in obsolescence). The second one, adaptable design, has been and still continues to be a topic of debate and architectural experimentation.

Most agree that large, open, "multifunctional" spaces free to be organised according to the users' needs and designers' intentions, are generally the most flexible.<sup>66</sup> However, single spaces intended for with different functions can demonstrate a high degree of inflexibility, whereby change in one area interferes with adjacent functions that oppose the change<sup>67</sup> (Lynch, 1974). This is of special relevance for this study, with respect to so-called loft-apartments, characterised by the open-plan scheme, which represents the major part of adaptive-use residential units. This unit model—basically undivided space with, in most cases, the bathroom being the only enclosed function, has size as its main, if not its only, functionality and flexibility factor.

The main reason for the high flexibility of old buildings<sup>68</sup> is due not so much to their open and undefined spaces but to their unusual spaciousness, allowing them to absorb future growth and change if

<sup>&</sup>lt;sup>65</sup> While flexible design means imagining future scenarios instead of merely satisfying the present requirements of intended building use, design will not be appropriate when it unrealistically attempts to satisfy every possibility. A good example of such an attempt is Beaubourg in Paris. It is over-serviced, over-structured, and generally over-designed to accommodate all potential changes in an unrealistic and uneconomical way (Farell, 1979).

Yet, there are examples of successful design of multifunctional buildings. Attempts have been made during the 1970s to enable different types of buildings, especially housing and factories, to adapt to future needs. Only recently, the successful design of schools in newly built districts, which can be easily transformed into housing when the baby boom has ended, has been achieved in Holland (Shwartz, 1998).

<sup>&</sup>lt;sup>66</sup> However, there is also a danger that flexibility could be confused with vagueness. In many instances, leaving spaces undefined, currently an often employed strategy because of its advantageous financial and loft reminiscence aspects, means shifting the responsibility for the decision to someone else, frequently the user. Vagueness may seem to give better immediate choice, but with time this could lead to the improper use of space resulting in inflexibility.

There is also a need to emphasize the danger of indeterminism. The design strategy of leaving things open is often employed with the aim of securing flexibility or maximum choice for the user. The danger of such a method is in its potential of undermining the role of the architect through the self-imposed limitation of not determining spaces and structure: "We should distinguish between indeterminism and openness. We are in favour of openness, of chance and of integrative strategy, of being incredibly precise and exerting certain determinations without necessarily knowing what the final effect is going to be ... Indeterminism is normally associated with more democratic ways of proceeding. We're not sure about that. You can not renounce responsibility for your agenda" (Excerpt from the interview with architect Alejandro Zaera-Polo) (Bullivant, 1999).

<sup>&</sup>lt;sup>67</sup> Also, regarding the possibility of subdivision of such spaces with movable partitions, experience shows that, although it is true that such spaces offer the maximum immediate choice, once in use with the partitions established—even if the divisions are made of movable panels—they are usually as resistant to change as any other space (Lynch, 1958).

<sup>&</sup>lt;sup>68</sup> Buildings built prior the Modernist Era, employing mainly traditional methods and traditional materials.

need should arise:

Again and again, in the past experience, it has been proved that the roomy Victorian house (with many "wasteful" spaces), or the large lot, or the low density development, are always the kinds of features which are easiest to remodel for new circumstances... There is a future advantage, in this sense, in waste and inefficiency. (Lynch, 1958)

Hence, the most obvious explanation for the general adaptability of older buildings is their oversized dimensions; their more capacious spaces compared to structures built after WWII and their well-built and still sound structure.<sup>69</sup> Everything leads to the conclusion that the best way to achieve design flexibility in general—and this is valid for residential adaptive use in particular—is to provide extra space for the envisioned functions, in order to give them the possibility for growth and change:

#### 1.4.5. Contextualism

The revival of interest in contextual strategies, the traditional approaches to the theory of urban design concerned with the relationship of new buildings to their existing surroundings,<sup>70</sup> re-emerged some 40 years ago with the recognition of the weakness of Modern architectural design theory in dealing with the traditional city. This period since then is characterized by attempts to find a way to reconcile traditionalism and progress, old and new, preservation and development, by searching a middle ground between all these opposites.

The idea of building in sympathy with and in relation to the site and the street was the dominant idea in urban design before the 20<sup>th</sup> century modern movement.<sup>71</sup> Modern theories of urbanism and their applications have tended to devalue the traditional city, imposing the idea of the twentieth-century city represented by Corbusier's Ville Radieuse model. The functionalism of the Modern movement dictated the abandonment of traditional architectural vocabulary, forms, and solutions. Besides its modern city schemes, Modernism had a predilection for idealised buildings as free-standing structures detached from their surroundings, imposing and asserting their importance in an urban context.

An early effort (1963-67) to revive the contextualist tradition was undertaken at Cornell University under the direction of Professor Colin Rowe. In 1965, Stuart Cohen and Steven Hurtt first

<sup>&</sup>lt;sup>69</sup> In addition, the flexibility of old buildings is the result of yet another specific characteristic. The structures of old buildings are relatively easy to reshape due to their material characteristics and traditional technology, which is still employable with relative ease. This makes them easier to handle than those built after WWII, the technology of which is often already obsolete and practically impossible to reemploy because the equipment used in their construction no longer exists.

<sup>&</sup>lt;sup>70</sup> Although it is most often linked to the urbanism of Mediterranean countries and the organic development of their settlements based on the intricate mesh of public and private spaces, historically contextualism is the traditional building approach around the world.

<sup>&</sup>lt;sup>71</sup> Before modernist ideas predominated, the last clear signs of interest in contextual concerns appeared at the eighth conference of Congrès International d'Architecture Moderne (CIAM) in London in 1945 (Shane, 1976). The main concern of the organizers was the "heart" and "core" of the city. Most of the papers presented were clearly contextualist—including Corbusier's plans for the French town of St. Die, although it was radically simplified in the tradition of the Modern movement (Shane, 1976). At the ninth CIAM meeting, however, completely different urban concerns interrupted the discussion on traditional urban design.

applied the term contextualism, which encompassed empirical theory or a set of design strategies derived from the urban theories of Colin Rowe (Cohen, 1974).<sup>72</sup> This approach has its roots in the analysis of piazzas and palaces set in medieval urban cores, whose own independent development during the Renaissance was accommodated at interface with the existing urban fabric (Shane, 1976).

In the contextualist view of the Cornell University group, the historical city is not composed of material, but is a history of human utopian aspirations<sup>73</sup> as well as their failures and deformations by everyday, empirical experience (Schumacher, 1971). This contextualist view of urban design accepts ideals and utopian ideas—including modernism—together with their deformations and distortions.<sup>74</sup>

In the mid-1960s there was a conscious revival of the contextualist approach, not only in the United States but also in Europe—especially Italy. While the American approach emphasized continuity and the vitality of tradition (Shane, 1976), the Italian rationalist school, especially the theory of Aldo Rossi, accepted as given the historical forms and typologies, proposing the design by analogy (Rowe and Koetter, 1975). Rossi's designs for the Central Area of Sannazzaro de'Burgoundi in 1967 best exemplified the combination of contextualist theory and the European rationalist search for a purist urban geometry cleansed of any meaning (Shane, 1976). Although different, both the American and Italian schools of architecture, and their respective urban views, no longer considered buildings in isolation from their context.

#### 1.4.6. Main Design Aspects of the Adaptive Use

While during the 1960s and 1970s the relation between old and new architecture was still largely unclear, the modernist aspiration for originality and novelty came practically to an end with the influence of postmodernism in the 1980s. Modernist philosophies gave way to the consideration of the existing building environment and traditional methods of dealing with it. The charm and human scale of traditional architecture and urbanism began to be appreciated again. This widely opened the door for the adaptive-use practice which, intrinsically incorporating both preservation of the old and introduction of

<sup>&</sup>lt;sup>72</sup> Alvin Boyarsky's thesis on Camillo Sitte, Cohen and Hurtt's examination of Le Corbusier's *Plan Voisin* for central Paris, Wayne Cooper's figure-ground drawings of urban precedents (Dennis and Herdeg, 1974) and Claus Herdeg's examination of complex geometry in the formal structure of Indian Temples (Herdeg, 1967) were among the studies undertaken at Cornell University in this period (Shane, 1976).

At this early stage, the Cornell School initiated schemes like the urban design projects for the Buffalo Waterfront, Harlem (1967), Walls/Koeffer Brighton Beach Project (1968), and Mund project for the redevelopment of Baltimore (1969) (Shane, 1976). The Mund project highlights the contrast between a contextualist approach and the large-scale urban clearances of the same period. The Mund proposals were for sensitive and minuscule modifications of the existing fabric that retain the identity of Baltimore while adapting the city to its new needs (Sherwood, 1969).

<sup>&</sup>lt;sup>73</sup> Such as Haussman's violent application of the simple Versailles geometry to medieval Paris, the 19<sup>th</sup>-century urban utopias, with their literal preoccupation with mechanical, moral and material progress that culminated in utopian cities characteristic of the end of the 19<sup>th</sup>-century, or the city-machine utopia of the Modern Movement (Rowe and Koetter, 1975).

<sup>&</sup>lt;sup>74</sup> According to Cornell ideas, the alternative to past utopias was seen in the contextualist approach represented by the work of modern architects like Lubetkin, Moretti, Albini and Moore, but also by Corbusier's buildings, though not his urban plans (Rowe and Koetter, 1975).

the new architecture, was the literal embodiment of such a philosophy, establishing itself in the architectural mainstream. Today, contextual design principles are clearly identifiable in general architectural tendencies of creating an active environment by weaving together the old and the new, as well as in almost all efforts to save and enhance the architectural heritage through its preservation and integration into ever livelier modern cities.

# 1.4.6.1. Introduction Of the New Architecture within the Existing Build Context

Maintaining historical continuity, in the sense of conserving existing assets as the best record of the past, remains the main objective for architectural preservation. However, the introduction of new architecture and its correct juxtaposition with the old increasingly occupies a significant place in the problem of preservation. The difficulty is finding the right way to make a harmonic blend of old structures and newly introduced elements.

While the history of architectural preservation, as well as of the architecture in general, was characterised by constant conflict between the old and the new, but also with the quest for ways to ease this tension, the current attitude seems to be encouraging old and new to interlink freely. A balanced attitude towards past, present, and future is gradually becoming the design trademark especially of the last decade. New architecture, whether in the form of small alterations and additions or insertion of completely new structures within the historic context, is now generally allowed to have its own say on the condition that it fully refer itself to past achievements and refrain from disrupting relations within the existing context. This trend is characteristic of the entire international scene, with most European countries allowing greater design freedom in comparison with North American and British practices.

Hypothetically, both old and new architecture should be given equal rights to exist: the old as a testimony of the past, capturing in its historical layers our identity and the ingenuity of past builders, and the new, juxtaposed with historic buildings, as a free expression of contemporary design and revealing the designers' creativity and individuality—neither idolizing the work of past masters nor ignoring it as a relic that should be forgotten and discarded. The main constants should be:

1) respect, consideration, and a sympathetic attitude towards the original architecture based on retention of significant original or early work;

2) new architecture that is distinctively contemporary, but aesthetically compatible with the existing context, based on the assumption that the current era and contemporary architecture deserve equal treatment and the right to their own expression as past époques and old architecture once did in their own time;

3) clear expression of materials, truthfully revealing the period of work, and a clear expression of the new functions, fully satisfying contemporary needs.

Main preservationist documents are in general quite careful when dealing with the introduction of

new architecture within the existing context. The *Venice Charter* says that: "Additions cannot be allowed except in so far as they do not detract from the interesting parts of the building, its traditional setting, the balance of its composition and its relation with its surroundings" (*Venice Charter*, Art. 13).

Similarly, the *European Charter* concept of *integrated conservation*<sup>75</sup> does not rule out the introduction of modern architecture in areas containing old buildings, provided that the existing context, proportions, forms, sizes and scale are fully respected and traditional materials are used (*European Charter*, Art. 7).

On the same subject, *American Standards* stipulates, "New additions should be designed and constructed so that the character-defining features of the historic building are not radically changed, obscured, damaged or destroyed in the process of rehabilitation. New design should always be clearly differentiated so that the addition does not appear to be part of the historic resource"<sup>76</sup> (*The Secretary Of Interior Standards*, in *Preserving Our Heritage*, p. 97).

The Canadian *FHBRO Code of Practice* is the only preservationist document that mentions the potential of the new architecture to contribute to the heritage: "Additions and alterations may be necessary to maintain appropriate use and occupancy, and may, if sensitive to existing heritage character, enhance a building's heritage character" (*FHBRO Code of Practice*, p. 31).

#### 1.4.6.2. Demolition of Original Architectural Elements

While new additions often alter the scale and proportions of the original volumes,<sup>77</sup> they endanger less the heritage than the removal or demolition of particular elements or segments of original structures. Although conservationists strongly oppose any demolition of the original features, it is often unavoidable in adaptive use. In order to reduce the damage to the minimum, demolition should be used only as a last resort, in cases where the only way to secure the building's survival is to sacrifice part of the building's integrity to prepare it for a new use.

<sup>&</sup>lt;sup>75</sup> The *European Charter* describes the interesting relation between conservation (in this case, a notion applied to the entire field) and restoration, thereby defining the contemporary preservationist scene dominated by adaptive use: "Integrated conservation is achieved by the application of sensitive restoration techniques and the correct choice of appropriate functions" (*European Charter*, Article 7).

<sup>&</sup>lt;sup>76</sup> A few more guidelines on appropriate design for additions and alterations are extracted from *FHBRO Code of Practice* and *Appleton Charter*:

<sup>-</sup> the design of additions or alterations to a building must respect its heritage character (FHBRO Code of Practice, Intervention Guideline 3.1, p. 31);

<sup>-</sup> the respectful design interventions may extend a building's traditional design characteristics, or in contrast, reflect contemporary design preferences; the appropriate approach will be a function of the relative scale, importance and function of proposed additions or alterations (*FHBRO Code of Practice*, Intervention Guideline 3.3, p. 32);

<sup>-</sup> new volumes, materials and finishes should echo contemporary ideas but respect and enhance the spirit of the original (Appleton Charter);

<sup>-</sup> additions and alterations should be recognizable as such on close inspection (FHBRO Code of Practice, Intervention Guideline 3.4, p. 32)

<sup>&</sup>lt;sup>77</sup> New floor introduction is a significant and most frequent addition in adaptive-use projects. *American Standards* recommend: "[a]dding a new floor when required for the new use if such an alteration does not damage or destroy the structural system or obscure, damage or destroy character-defining spaces, features or finishes" (*The Secretary of Interior Standards*, in *Preserving Our Heritage*, p. 82).

#### 1.4.6.3. Restoration of Original Features

As was the case since its inception in the early 19<sup>th</sup> century, restoration still remains controversial even when justified by valid arguments. However, contemporary preservationist practice has mostly succeeded in eliminating the negative connotation of the 19<sup>th</sup>-century notion of restoration, connected with effacing of historicity and authenticity of the original architecture due to the insistence on the stylistic uniformity at any cost and segregation of the original elements on the basis of the period of their creation.

According to the main contemporary preservationist documents, restoration of the missing original features is recommended only in exceptional cases with design decisions based either on still existing original elements or on sound historical sources.<sup>78</sup> When exact replication of the original elements is not to be undertaken, the choice of materials for new additions should be in accord with the present time and contemporary technology, so as not to confuse the observer about the date of its installation.

#### 1.4.6.4. Facadism and the Relationship Between Original Facades and New Interiors

The phenomenon of *facadism*<sup>79</sup> epitomizes the entire adaptive-use problem dealing with alteration of the original relation between the interiors and exteriors of adapted buildings, and although an extreme treatment, it occurs frequently enough in to warrant its own term. It involves the preservation only of the street façade, while the rest of the building is either demolished (in the case of a continuous street facade) or the interior is gutted, leaving only the shell (in the case of free-standing buildings). The demolished parts are then replaced with a contemporary structure based on a new design, creating a new interior and thus practically reducing adaptive-use projects to a new construction. Newly introduced interiors often have no connection with the preserved exterior, thus making facadism a literal expression of the main adaptive use problems: fragmentary vision of heritage and antagonism between preservation and pragmatic issues.

Such a design strategy spurred much of the controversy.<sup>80</sup> Facadism was the main topic of a 1989

<sup>&</sup>lt;sup>78</sup> Regarding the design of missing historic features, American Standards concedes it to be "an accurate restoration using historical, pictorial and physical documentation; or a new design that is compatible with the size, scale, material and colour of the historic building. It does not recommend creating a false historic appearance basing the design for replaced architectural feature on insufficient historical, pictorial and physical documentation." (*The Secretary of Interior Standards*, in *Preserving Our Heritage*, p. 82) The opinion of the Venice Charter on the same opinion is that "the replacements of missing parts must integrate harmoniously with the whole, but at the same time be distinguishable from the original, so that restoration does not falsify the artistic or historic evidence" (*Venice Charter* Article 12). <sup>79</sup> "Where the heritage character of a building lies both in its façade and its structure, interior finishes and spatial

<sup>&</sup>lt;sup>79</sup> "Where the heritage character of a building lies both in its façade and its structure, interior finishes and spatial organization, facadism (or retention of only the building façade) is not an acceptable form of conservation. Where the heritage character rests strongly in the façade, and interiors have little value or have been much altered, retention of a façade in whole or in part may be acceptable but only as a solution of last resort.

Facadism became a popular compromise between demolition and new development in the 1980s. It is now recognized as an approach which usually undermines the integrity of the original building, its heritage character and the integrity of the contemporary design. With the increasing interest in maintaining the relationship between building exteriors and interiors, particularly in public buildings, facadism is now generally viewed as a less acceptable form of conservation" (*FHBRO Code of Practice*, Intervention Guideline 3.5, p. 33).

<sup>&</sup>lt;sup>80</sup> Jonathan Richards in Facadism writes: "It has been claimed that facadism prevents new architectural styles from

preservationist symposium in Montreal. Most professionals condemned it, but without examining its origins and its nature (Bumbaru, 1989). Unlike the professionals, the general public and local communities often favourably regard this practice because it helps perpetuate the existing urban identity. Although the sensitivity of such a method is questionable, the importance of facades is correctly recognised (Bumbaru, 1989).

The final result will, in the eyes of many, satisfy the requirements for assuring buildings' survival. However, the question is how much of the building is really saved when only its exterior appearance, in the form of the preserved facade, is perpetuated and the original interior spaces and atmosphere are replaced with something having no connection whatsoever to the sense of scale, proportions, or materials of the original building.

#### 1.4.7. Different Attitudes in Different Countries

Today, even though the main preservationist principles, clearly outlined in a series of charters and diverse documents intended for the entire international community of countries and national preservationist practices, are globally accepted, the international preservationist scene is still not completely homogeneous. As always, variations from country to country and differences in regional approaches render their universality relative.



#### **Fig. 4. Louvre** The strong architectural statement of I. M. Pei's 1986 transparent glass pyramid, boldly inserted within the historic

transparent glass pyramid, boldly inserted within the historic complex of Louvre, is mainly neutral due to its non-interference with respect to the original architecture (Photo: Mila Vujadinović, 2001)

#### 1.4.7.1. Europe

While North American practice is based mostly on the implementing of internationally accepted principles, redefined for its own reality through the system of practical guidelines, the practice in Europe is less coordinated and more difficult to sum up. As always, it is regulated more by national and local tastes and, due to the fact that each country has particular national historic realities

and traditionally accepted values (as seen in Chapter 3), coupled with recent specific developments mainly in the last half of the 20<sup>th</sup>-century, the result is that practically every European country has a distinct style or preservationist approach. For example, France has become known for its political exhibitionism in the form of spectacular projects—*les grands projets*. These are located within the

evolving and reduces buildings to mere elevations or self parodies. It has been condemned by architectural purists for causing the divorce between interior and exterior of buildings and creating townscapes which are little more than stage sets... However, justification has also been offered for facadism on the grounds that it is a valid method of urban conservation which enables the retention of familiar historic streetscapes or formal set pieces of urban design. At the same time, it also allows the provision of up-to-date accommodation with all its comforts and conveniences" (Richards, 1994, p. 2).

historic cores of cities, especially Paris, and some of the preservationist projects are of the same nature and grandeur—to mention only the restoration of the Louvre (Fig. 4).

Europe has a strong inclination towards restoring history. This is especially true of countries and regions which suffered significant destruction during the Second World War,<sup>81</sup> as well of Italy, with its slightly different theoretical foundation. Italian strategy in the reconstruction of the Venice's Campanile is typical. The tower, which in 1902 had become a pile of rubble, was entirely rebuilt using reinforced concrete. The point is that even today probably no one would be surprised if such an approach were adopted again. Maximilian Ferro, for example, is certain that leaning tower of Pisa, should the need arise, would be rebuild in the same manner, despite the categorical opposition of the principles of the *Venice Charter*, which stipulate respect for original materials and the inappropriateness of restoring original features (Ferro, 1985).

Also, some recent interventions undertaken in Italy, involving tension between the manner of the contemporary intervention and the historic fabric, would simply not be tolerated in some other cultures. A typical example is Renzo Piano's adaptation of the FIAT Lingotto factory in Turin (Fig. 5). Piano placed a "slim cylindrical chrome-yellow blind box" at the head of every window, a detail that North American or British preservationist practice would have found difficult to permit<sup>82</sup> (Greenberg, 1996).

In many senses the specific Italian preservationist approach is best illustrated in the theory of Cesare Brandi, the founder and first director of the Italian Central Institute of Restoration in Rome (Jokilehto, 1985). Brandi considers preservation and restoration within the context of art in general. Although important, architectural heritage represents only one segment of the wider heritage concept that includes all forms of artistic expression. Brandi treats restoration as a method for maintaining works of art for the future, putting their aesthetic and historical aspects to the forefront. Although advocating that reestablishing their potential unity should be with as little falsification as possible, Brandi does not disapprove the replication of the original craftsmanship. Although similar to Ruskin's philosophy in its primary concern for aesthetic and historic dimension, Brandi's approach is opposed to Ruskin's theory, still in the core of Anglo-American preservationist philosophy, which is basically against tampering with the original elements.

The important contemporary issue of change of use has been practically entirely left out, both by Ruskin and Brandi. Even the *Venice Charter* stops short of the deeper considerations of the change of use as an approach to building preservation, saying only that "conservation of monuments is always facilitated by making use of them for some socially useful purpose" (*Venice Charter*, Article 5).

<sup>&</sup>lt;sup>81</sup> Warsaw and Dresden are extreme examples of heavy destruction and comprehensive reconstruction.

<sup>&</sup>lt;sup>82</sup> Unlike Italy's relaxed attitudes, British attitudes are far more reserved. For example, Stirling's extension of the Tate Gallery, London, to form the Clore Gallery, was met with mixed reaction: "For many it had a European edge to it: it was too stark, too blatant, too un-English" (Strike, p. 18).







The transformation of the former Fiat factory (1988-92) into a mix-use complex (shops, offices, a hotel, a university, public parks...) was designed by Renzo Piano Building Workshop design (images and information source: Pearson, 1997)

Top – Eastside elevation (most of the new sun shades are down)

**Below** – Four fenestration details. The old windows (far left) were replaced with aluminium-frame double-glazed casement ones. The windows, although fitting into the old openings and alluding to the old in its grid, are clearly new elements. New glazing is clear, while sun protection was solved by installing canvas shades, stored in bright green rolls at the top of each window (far right) (provoking a certain amount of tension between old and new, the distinctive green shows up all over the project—in railings, window trim...). Not all windows were replaced; in a discreet gesture, the architects restored the original windows on one portion of the building—one of the towers crossing the interior courtyard (see the top image—enlarged detail)—creating a subtle link between old and new.

While the building's concrete-frame structure was still in excellent condition, its stucco façade surfacing was crumbling in many places. In accord with the Cesare Brandi's approach, architects reapplied the old type of stucco used, which has a higher sand content and is more textured than today's.

**Bottom two images** – Western façade (upper) and view from the north to one of the western courtyards (bottom). Among the numerous highly distinctive new additions, the most prominent are the pair of spherical roof-top conference rooms and circular helipad.

#### 1.4.7.2. North America<sup>83</sup>

#### 1.4.7.2.1. United States

In North America, tax incentives have helped make rehabilitation cost-effective in United States, which has a proportionally larger number of preserved buildings than Canada. If the practice of urban renewal, prior to the strengthening of preservationist practice, had not destroyed so much of the urban fabric—much more than in Canada—American heritage architecture would be in better shape than its Canadian counterpart (Tschudi-Madsen, 1985). However, opinions about the American experience are divided. Regulated by standards, it is much more immune to the undesirable destruction that may result from inappropriate design. However, in many cases, this aspect has also the negative implication of limiting designers' creativity and suppressing the more innovative solutions that would otherwise be appropriate to Europe and even Canada. The results are often neutral solutions that do not usually meet the quality of the original architecture or allow for adequate new design.

It is impossible to express every preservationist intention through absolute rules or guidelines. Even if it were possible, and if practice could have a set of universal standards for every situation and project, it would be practically impossible to enforce them. The given set of guidelines or principles will always be interpreted differently, since interpretation is based on personal opinion and integrity, factors which change from individual to individual and from project to project. In the dispute between professionals in government, who are responsible for the heritage protection and whose aim is to ensure the survival of the integrity of old buildings, and developers for whom the main concern is financial, many preservation projects evade the real intentions of the principles embodied in the Standards.<sup>84</sup>

In spite of its negative aspects, American Standards remains the principal criteria for acceptable rehabilitation, against which the success or failure of adaptive use projects are judged. It is generally considered to be an excellent document since it contributed to an increase in the number of preserved buildings (Murtagh, 1990, p. 123, and Stovel, 1988). A strong argument for the existence of some form of

<sup>&</sup>lt;sup>83</sup> If France, England, Germany and Scandinavia had contributed to the development of the guiding principles, in the 20<sup>th</sup> century the New World took the lead in introducing quite another world to be protected – Nature. This gave a totally new dimension to our work, to the principles and to politics. It is no longer conservare, but prae-servare. It is Preservation in the widest sense of the word. [...]

It is certain that North America, by this, introduced a new dimension to safeguarding of our environment; and the influence has spread to Europe. There is, however, also another field, where North America has contributed in a most important way by including Industrial Heritage in the Preservation scheme. The introduction of Nature into Preservation gave it a new dimension, the introduction of the Industrial Heritage has given Preservation a new profile.

Today we are thus in a situation where the USA and Canada, which for some time received their impulses from European philosophy in the field, now are repaying by developing a wider concept of Preservation where monument and Nature, buildings and environments are integrated (Tschudi-Madsen, 1985).

<sup>&</sup>lt;sup>84</sup> In the United States, many projects have dodged the rules and intentions prescribed in the Secretary of the Interior's Standards. This results in an increased rate of surviving buildings but at the cost of significant damage to the architectural and historical components (Stovel, 1988). American developers have also become "better attuned to the system ... and have quickly learned that expensive decorations and finishes must be made to disappear *before* the formal process begins, so that the 'before' photos to be submitted with the paperwork will show no significant plaster or trim worthy of costly conservation" (Tschudi-Madsen, 1985).

standards is also the uniformity that it can give to the often different opinions about certain issues. It facilitates the fundamental education of developers new to the practice and has a net positive effect on preservationist culture (Murtagh, 1990, 123).

It is necessary to accentuate some aspects of decision-making in appropriate design. Integrity and honesty, for example, are conditions without which no preservationist concept, theory, or set of standards alone could secure successful results. While the notion of integrity is usually applied to the architectural integrity of the buildings that one seeks to protect and that of honesty has to do with respect for the original materials and period of construction, it is necessary to expand these notions and emphasize the designers' professional and personal integrity. Architects' decisions must be honestly and satisfactorily justified before action.

In order to maximize the possibility of a successful result, besides respecting the already established system of preservationist norms, it is necessary that designers employ all their experience, creativity and imagination. Without satisfying all these conditions, the successful preservation of a building's architectural and historical values cannot be guaranteed.

#### 1.4.7.2.2. Canada

Canadian preservationist philosophy allows a wider variety of solutions than is the case with the much stricter attitudes in the United States<sup>85</sup>—the methods employed are sometimes reminiscent of European practice. These solutions range from the best cases of conservation work to solutions which are questionable even in the light of the most fundamental preservationist principles.

Montreal has a few historical buildings of exceptional architectural and historical importance that have been cautiously preserved. For example, the Maison Del Vecchio, the Maison Denis-Viger, the Maison du Calvet and the Maison Papineau (Figs. 6 and 7) exhibit the highest quality of preservation. Notable in all these projects is the high degree of reparation and conservation, without significant notable alterations or additions. Visible also is a partial restoration of the façade walls. An important detail is the full restoration of the original small-scale subdivided window sashes.

Part 2 of the thesis will show that the correct preservationist/restoration strategies adopted for these early adaptive-use projects have been, with the exception of a few of the earliest undertakings, over a long period almost completely disregarded in subsequent preservationist practice in Montreal. It is only in some recently completed projects that similar appropriate strategies and results can be observed.

<sup>&</sup>lt;sup>85</sup> In Canada, for instance, where no tax credits were enacted, a few historic buildings have been meticulously conserved, most with public funds (Spadina House comes readily to mind), and this work tends to equal the best of our efforts in the field. Others have been decidedly restored, as conjecturally as any work of Sir Gilbert Scott or Viollet-le-Duc, in a conscious effort to serve political objectives: Louisbourg and Quebec's Lower City, like Williamsburg before them, are patriotic statements, intended to recapture more the spirit than the reality of a celebrated heritage. Most older buildings, from Alcan's shining new headquarters on Sherbrooke Street to Toronto's mod shopping streets of Yorkville, have frankly become blends of old and new, uniting patina of the past with a vibrant glimpse of the present and the future. Virtually none of these projects would meet U.S. certification standards. (Ferro, 1985)



#### Fig. 6. La maison Del Vecchio and La Maison Denis-Viger

**Top** – La maison Del Vecchio and La Maison Denis-Viger (white dotted line frame) before conservation (Photo: CUM; Pinard, 1987, Vol. 4, p. 139)

**Below** – La maison Du Calvet and La Maison Denis-Viger after conservation (black dotted line frame) (Photo: Rémi Lemée, *La Presse*; Pinard, 1987, Vol. 4, p. 139)



#### Fig. 7. La Maison Du Calvet and La Maison Papineau

**Top** – La Maison Du Calvet: before conservation (left) (Photo : Magasin Ogilvy) and after conservation and partial restoration (right) (Photo: Pier McCann, La Presse; Pinard, 1987, Vol. 4, p. 230)

Bottom - 1964 Eric McLean restoration of the Maison Papineau <a href="http://www.vieux.montreal.qc.ca/histoire/cite.htm">http://www.vieux.montreal.qc.ca/histoire/cite.htm</a>

# 1.5. Chapter 5: Housing Issues Within Adaptive Use

#### 1.5.1. Introduction

The industrial downturn and the relocation of industry outside large North American cities—including Montreal—has resulted in numerous empty or inefficiently used commercial buildings, factories, and warehouses. The population moving out of the inner city to the suburbs also left vacant many institutional buildings, such as convents, churches, and schools. Besides these, other public buildings such as cinemas, hotels, garages or public baths, were also abandoned. Many of these buildings have been converted to a variety of uses, most commonly residential.

Contributing to the appeal of living in adapted old buildings is the fact they are usually situated in the most attractive locations, near and around the inner city, with urban amenities such as transportation, cultural institutions and entertainment. It is especially service sector workers employed in the central city whose growing numbers are showing a preference for living downtown, close to their jobs.

Contemporary adaptive use for residential purposes is a successor of the Manhattan loft phenomenon, initiated by local artists in the early 1960's. The necessary height, light and undivided spacious interiors space conducive to their work and living, the historicity and charm of multi-storey industrial buildings, their availability and affordability— were the main features that induced artists to convert them. By minimally interfering with the original architecture, and yet perfectly interacting with artist lifestyle, the newly created loft units managed to uncover and even enhance the intrinsic qualities of the original buildings.

Following New York's example, the phenomenon soon spread to other parts of the United States and Canada and Europe as well. So-called *lofts* became famous. Developers quickly assumed the lead in loft-conversion practice, legalizing it and creating a new housing market niche. The main marketing tool was the prestigious loft-living image based on a chic artistic lifestyle appeal and the exceptional architectural qualities of historic buildings.

In the beginning, arguments in favor of adaptive use were based mainly on a pragmatic motivation to recycle valuable buildings with a relatively low acquisition cost. A significant additional argument was the low quality of new construction, especially when compared with the quality of materials, structural soundness and adaptability of old buildings. The importance of their heritage value was not entirely perceived as it is today. It was only in the 1970s that the public began to realise the value of the existing built environment and it is only recently that financial considerations—whether it is cheaper to adapt or to demolish and rebuild—have given way to preservation issues. The success of adaptive-use projects gradually became directly dependent on the success of heritage protection—the

heritage value of a given adapted structure becoming one of the main attractions for its new inhabitants<sup>86</sup> and its preservation one of the most important motives for adaptive use. Nowadays, the public is ready to pay a higher price for a residential unit in an adapted building than for a newly constructed one—an attitude all but inconceivable only a couple of decades ago

In addition to the popularization of architectural preservation, this is also so due to the unusual possibilities for interior design of most of these buildings. By taking advantage of the original interior spatial qualities and design flexibility, architectural emphasis on certain heritage qualities is often decisive for achieving the extraordinary quality of housing expected from adaptive use.

#### 1.5.2. Housing Concepts Relevant to the Contemporary Adaptive Use

Conventional housing concepts and Manhattan loft conversions have the greatest influence on contemporary adaptive use for housing. While Manhattan lofts are the direct predecessor of contemporary adaptive-use units, conventional housing configurations have been increasingly notable in adaptive-use projects since loft-conversions legalization in 1970s—besides the open-plan single-space ("loft-style") layout, residential units in contemporary adaptive-use projects are increasingly taking the form of conventionally subdivided units with functionally separate spaces. However, there is another residential concept, more than a century old, whose experience could be relevant to adaptive use. The concept of the so-called New York *studio apartment houses* (Shoneauer, p. 303), in some aspects—especially its interior layout which is an interesting combination of the artist studio and conventional residential functions— seems quite applicable to contemporary adaptive use.

Despite the fact that they are not the product of building adaptation, *studio apartment houses*, originally designed for artists' working/living needs and built in New York mainly in the early 20<sup>th</sup> century, share many common points with Manhattan lofts. Working-living accommodations in these two schemes resemble each other not only in their physical aspects and original use but also in their evolution. Both concepts, after becoming popular, lost their studio component and with relatively minor modifications were adopted by higher-income groups for their purely residential purposes. Although fulfilling all the requirements of conventional housing, they differed from it in the extra qualities inherited from the original concepts.<sup>87</sup>

<sup>&</sup>lt;sup>86</sup> "[...] des propriétaires de logements recyclés [...] sont tout à fait lucides face à la gestion de l'argent. Pour plusieurs, le contenu patrimonial et l'aspect unique de l'architecture représentent une garantie contre la perte de valeur du logement" (Lavigne, 2000).

<sup>&</sup>lt;sup>87</sup> Originally tailor-made to satisfy the work-living requirements of a select number of New York artists, the 19<sup>th</sup>century studio apartment houses scheme proved its flexibility by readily allowing change of the buildings' original use. The layout of these apartments, clearly designating work and living functions to large separate spaces, was adapted without major alterations for the exclusively residential needs of the well-to-do clientele. The major change in the already luxurious original units was switching the orientation of the working-studio space from northwards to southwards. This space was then used as a large living room suitable for receiving a large number of guests.

The open-plan work-living arrangement of the Manhattan lofts, typically without any spatial and functional

Two main schemes relevant to the contemporary adaptive use thus can be distinguished:

1) duplex apartments in *studio apartment houses*, typically with a double-height studio working space and conventional residential functions (original layout, already conceived with all the conventional housing needs in mind, changed basically only in its orientation when modified for exclusively residential purpose)

2) artist lofts—essentially large open-plan spaces with little or no functional space designation (losing much of its original essence after conventional housing elements have been imposed on its minimalist working-living arrangement)

Drawing a parallel between these concepts on the one side and the concepts employed by contemporary adaptive-use projects on the other, may help in analysing the unit design and indicate how to improve their often problematic layout. Also, the artists' unobtrusive conversions may contribute to the improvement of the preservationist component of contemporary adaptive use.

#### 1.5.2.1. New York Studio Apartment Houses

The first studio apartment house (Fig. 8) was actually built in 1858 (Shoneauer, p. 303). It became the centre of the city's artistic life, but nevertheless it took several decades for other buildings of this type to be constructed. At the turn of the 20<sup>th</sup> century, demand for studio-apartment type accommodation reappeared (Handlin, p. 379).

Among the first of these buildings was 27 West 67th Street, designed by Pollard and Steinman and completed in 1906 by the painter Henry W. Ranger and several other artists (Fig. 9) (Schoenauer, p. 303). The building had 14 studio apartments organised around a core containing an elevator and stairs. Each studio apartment was divided into two parts: a double-height studio (5.5 m) facing the back (northern) side and living spaces, distributed on two levels by the introduction of a mezzanine, oriented towards the street-side. The bedroom was upstairs and the living, kitchen, and dining space were on the lower level (Handlin, pp. 379-80). A similar large building was soon built on the south side of 57<sup>th</sup> Street, allowing the studios a northern exposure on the side facing the street (Handlin, p. 380). By the turn of the century, a few other studio apartment buildings were built.<sup>88</sup>

designation, has also been easily modified for exclusively residential use, which became the precursor of the present adaptive-use residential layout. Even today, open-plan units are known as "loft-units" and represent a significant portion of adaptive-use housing production.

<sup>&</sup>lt;sup>88</sup> Some notable examples are Sturgis and Simpson's studio-apartment house built in 1910; Charles A. Platt's studio building at 131-135 East 66th street on the northeast corner of Lexington Avenue, with its Renaissance palazzo-inspired façade, built in 1906 (Schoenauer, p. 303); and Hotel des Artistes at One West 67<sup>th</sup> Street built in 1916 (Fig. 10) (Alpern, 1992, p. 43).



Fig. 8. Studio House of Richard M. Hunt (1858) In 1936 still continuing in the original use (Photo Berenice Abbott) (Alpern, 1992, p. 40)







Fig. 9. The 1906 studio of Henry W. Ranger The generous dimensions of the space and the artist's possessions established the atmosphere of the space (Handlin, 1979, p. 380)



#### Fig. 10. Hôtel des Artistes

Studio apartment house built in 1916 with living rooms facing both north and south

Left - The studio of one-time court painter Emil Fucs; living room-view to the gallery (upper) (Alpern, 1987, p. 48); Southfacing façade (below) (Alpern, 1987, p. 44) **Right** – Typical floor details: two 8<sup>th</sup> floor south-west corner units—mezzanine level (upper) and main floor level (below)

(Alpern, 1987, p. 90). Living rooms are two storeys high in keeping with the layout of the original studio apartments.

The social gatherings organised by artists attracted members of higher social levels who, charmed by both the glamour of artistic life and the extraordinary spatial characteristics of the studio apartments, expressed the desire and demand for such accommodations for themselves. The result was the construction of many buildings with duplex studio units that did not serve as an atelier of any sort. The orientation of these buildings was chosen according to the criteria of conventional apartments. Studios, originally oriented towards the north, took up the role of the living room and got a southern orientation. The spaciousness and layout characteristic of the artists' studios were retained, opening possibilities for unconventional interior decoration (Handlin, p. 381).

The artists' need for natural light and space ample enough to cope with large canvases and heavy sculptures defined the architecture of the studio apartment houses, which saw architectural and spatial characteristics similar to those of 19<sup>th</sup>- and early 20<sup>th</sup>-century industrial architecture. Facades of the studio buildings, those formed by double-height ateliers, closely resembled the aesthetic of their industrial contemporaries, which a century later have been converted into lofts (compare Figs. 10 and 11).



1.5.2.2. Manhattan Loft Conversions

In the 1960s, obsolete industrial and commercial buildings of considerable heritage importance were plentiful in the deserted central industrial districts of New York City. Their interiors with features such as vast open spaces and high ceilings attracted local artists, especially those working on large paintings and sculptures, who were looking for affordable spaces in which to live and work. Manhattan soon saw an of unprecedented activity appropriation of abandoned industrial buildings which were recycled into atelier/living spaces.

**Fig. 11. Industrial buildings in Manhattan** A typical street scene in SoHo in the middle 1970s (Hudson, 1987, p. X)





**Fig. 12. Partial view of a loft in Manhattan Top** – Before adaptation (Zukin, p. 7) **Bottom** – After adaptation (Zukin, p. 7)

Loft conversions quickly infused life back into derelict industrial districts (Figs. 11 and 12) and served as a model for similar conversions in other large American cities. Media, especially movies, caught on and promoted the trend, establishing powerful imagery based on the combination of unusual architectural loft aspects and glamour surrounding artists. Soon it was not only a North American phenomenon. After being promoted by prestigious European, especially Italian, architectural and interior design loft-conversions were magazines, numerous undertaken across Europe as well. Development of the "loft lifestyle" also coincided with a nostalgic interest in the industrial era and the promotion of the "High Tech" aesthetic, inspired primarily by industrial design.

#### 1.5.3. Evolution of Contemporary Residential Adaptive Use

Initially, lofts were basically spacious work-living spaces with minimal comfort. Later on, in the early 1970s, their original character changed as developers, taking advantage of their rapidly growing popularity, gradually assumed and legalized the loft-conversion practice, setting the foundations of contemporary residential adaptive use.

A prestigious and comfortable new housing type was created in order to meet the demands of the new clientele, mainly upper middle-class, with no connection to art. Besides being attracted by the many advantages of the central city areas, they also wanted to be part of the hip loft lifestyle. Developers thus started producing fashionable apartments, which they continued calling lofts. A purely residential character replaced the work-living nature of original lofts, imposing the requirements of the conventional luxury condominiums on a housing type, which originally only intended to provide artists with affordable live-in ateliers.

During the relatively short period between 1961 and 1985, a large part of Manhattan's commercial building stock was recycled (Hudson, 1987, p. xi). The social structure of the neighborhood

#### 1.5. Housing Issues Within Adaptive Use

was no longer the same; artists unable to compete in the new real estate market were forced to leave in search of cheaper accommodation, thus closing the gentrification cycle.

Comparing the artists' lofts and apartments in buildings adapted by developers, and understanding the reasons and motivations behind these two concepts, may help us discover the roots and possibly solutions for the negative aspects of modern adaptive-use design. Grasping the essence of the initial adaptations could have the potential of reviving their original values, which were lost when the profit motives were introduced by the developers, and hence inspire a more acceptable attitude for contemporary residential adaptive-use projects. The aim should be to find some common ground between the sympathetic spirit of the pioneering Manhattan lofts and the conditions and requirements imposed by users on contemporary adaptive use.



#### 1.5.3.1. Illegal Artist Loft Conversions

The basic principles of appropriate preservation and enhancement of the original architecture, together with the fulfillment of the new use requirements through a flexible and reversible interior layout, can be found in the phenomenon of Manhattan's loft conversions. The spirit of these first adaptive-use projects was spontaneous, improvisational and sensitive to the value of the architectural heritage. The nature of the interventions was non-invasive and in accord with the artists' aesthetic sensibilities and spirit of community. Such an approach, in many respects embodying the best preservationist principles, is what made these pioneering endeavours successful.

# Fig. 13. Illegally converted industrial building

(Corner Dupont St. and Ossington Avenue, Toronto) Work-living loft units are cohabitating with the remaining small businesses. Zoning is industrial thus making the residential use illegal. Original architectural features are practically unaltered and all new elements, including the mezzanine and bathroom components, are easily movable. **Top** – Dupont St. façade (Photo 1998)

Middle – Typical loft unit: living area (left) and bathroom (right) (Photo 1998)

Bottom - Kitchen area (Photo 1998)

Through work-living arrangements, artists exploited industrial spaces in an unusual way. The original interior spirit of a bygone industrial age, when these spaces were filled with movement, sound and energy, has been revived through another activity—the production of art. It permeated spaces with an atmosphere of usefulness in the manner of their former industrial function, without the "ambiance of cultivated informality" (Handlin, 1979), typical of the apartments in the New York studio houses, as well and often of contemporary adaptive-use residential units.

This democratic arrangement allowed the free mixing of functions and openness to visitors. The former character of the manufacturing and warehouse spaces was successfully combined with residential and art-production functions through an appropriate combination of the existing and a few newly introduced elements. The original structural elements, wooden beams, wooden or cast iron columns and brick walls, were mainly left exposed, while a minimal amount of new fixtures was installed. Drawing additional inspiration from a feeling of nostalgia for past industrial times<sup>89</sup> and charm of the artistic lifestyle, resulted in a new work-living concept.

Artists and appropriated industrial buildings were related through a natural symbiosis; the building provided shelter for artists who discreetly accommodated themselves while providing building maintenance in return. Artists made optimal use of the intrinsic flexibility of the interior spaces. Their interventions took the form of mobile and often improvised divisions that enabled them easily to modify the units, according to their changing needs—almost without altering the original architecture (Fig. 13).

They exercised a deep appreciation and respect for the past embodied in these interiors, not only leaving practically intact the original materials, features and traces of the former use, but also effectively using and incorporating them into the new scheme. The result was the exceptionally successful preservation of the original architecture, including the perpetuation of the original atmosphere of the working environment and the true nature of the materials—together with patina.<sup>90</sup> The history and continuity of the buildings was not interrupted; on the contrary, by emphasising elements that revealed the buildings' past, their historical value was enhanced.

<sup>&</sup>lt;sup>89</sup> "A sense that the great industrial age has ended creates melancholy over the machines and the factories of the past. Certainly such sentiments are aroused only at the end of an era, or with a loss of function. As a perceptive observer of 'eccentric spaces' points out, 'We visit the docks in London but not in Rotterdam because commerce is romantic only when it has vanished'" (Zukin, 1982, p. 59, quoting Harbison. p. 131).

The contemporary interest in historic industrial architecture is best illustrated by the industrial archaeology field, dedicated to examining and protecting the remnants of the Industrial Era.

<sup>&</sup>lt;sup>90</sup> "Patina is the evidence of wear and tear on architectural materials, and the settling of what is commonly referred to as dirt, which only time and use produce. To remove too much of the patina, resulting in a raw, new look, contributes to the perceived loss of historical character. A certain amount of dirt and imperfections caused by the knocks of the time - sags, chips, etc. - constitute the irreplaceable quality that is patina. Once removed no amount of effort can reproduce it" (Murtagh, 1990, p. 121).

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# 1.5.3.2. Developer-Undertaken Loft Conversions

The situation was not the same after developers took over loft conversions and eliminated the artproduction component, catering to non-artist customers who, while insisting on the loft image, were almost solely interested in the residential aspect.<sup>91</sup> The result was a new type of exclusively residential loft units depleted of a significant part of their original spirit. Their only point in common with the original lofts were the main physical aspects, such as the exposed original structural elements (e.g. brick walls and wooden or cast-iron columns and beams) and their open-space layout. Basically reduced to the mere décor, these features served primarily as an effective marketing tool whose main role was to perpetuate the image of the original lofts (Fig. 14, bottom).92

Conventional housing values imposed a much greater strain on buildings than the artists' approach, as they required more intensive alterations. This meant tampering, on a small or large scale, with both the buildings' structure and the finer architectural features and elements, both

Fig. 14. The Candy Factory Lofts (Former Candy factory, Toronto—southeast corner of Queen St. West and Shaw St.) Top – Queen Street Facade Middle – Showroom: interior of the typical loft unit in the developer-converted industrial building—view from the elevated sleeping area. (Photo 1997) Bottom – Showroom—view from the sleeping podium (Photo 1997). Designated "studio" space is reminiscent of lofts' artistic roots

 <sup>&</sup>lt;sup>91</sup> New adaptive-use residential units are rarely used as were the original work-living spaces, most often reducing art production to the level of dwellers' hobbies.
<sup>92</sup> Painting stands are part of the décor of the showrooms, reminding the public of the art component of the original

<sup>&</sup>lt;sup>92</sup> Painting stands are part of the décor of the showrooms, reminding the public of the art component of the original lofts and illustrating the affinity of the new dwellers to the artistic lifestyle, as a main reason for the lofts' popularisation beyond artistic circles.

in interior spaces and on the building facades. The spirit of community, of make-and-do, was replaced by the more rigorous methodology of a single designer.<sup>93</sup>

This has remained the essence of adaptive-use practice until today. Predictably, further adaptiveuse projects dilute the essential, original qualities, both the spatial attributes and the original lofts' intentions. Spaces gradually became smaller and alterations more significant, giving in to market pressures; while more artifice was used to simulate a lifestyle and aesthetic appropriated from a foreign sphere.

The participants in present day adaptive use should focus on achieving a balance between the issues connected with artists' adaptations—naturally favourable to preservation—and economic questions. One set of considerations must be drawn towards the other: these essentially incompatible factors become carefully integrated to generate functional and architectural harmony. The habitation of Manhattan's industrial buildings in accord with the original loft concept was close to this ideal balance, achieving a successful coincidence of practical and aesthetic transformations.

Reality however shows that these conditions are hard to simulate in most contemporary projects for various reasons, the main one being socio-economic in nature—the same one that redirected the loft-conversion practice in the first place. The best solution is to aim towards the definition of some tenable territory where the current economic and architectural domains overlap, trying to favour architectural and preservationist issues as much as possible; a millimetre gained towards the architectural side is a significant advancement in the field of preservation and adaptive use.

# 1.5.4. Design Issues Particular to the Residential Aspect of the Contemporary Adaptive Use *1.5.4.1. Relation Between the Interior and Exterior of the Buildings Adapted for Housing*

Beside the preservationist issue of minimizing the alterations introduced when changing the buildings' use, one of the most sensitive aspects of adapted buildings is establishing properly the relation between their new interiors and exteriors which, in most cases, are completely dissociated: the new functional character is usually confined in the interior, while façades keep their original character, expressing the nature of the former use.

Evident is the discrepancy between the preservationist requirement of perpetuation of the original architecture—including its original character, much conditioned by the original use—and a legitimate right of the new use to be allowed its own expression as well. This is an issue especially actual for housing adaptive-use projects because of the most often big difference between the new residential nature

<sup>&</sup>lt;sup>93</sup> There are exceptions where future inhabitants are consulted about their needs and where design is partially based on communal decision-making. Such is the case with most cooperative housing projects. Inhabitants are usually consulted by the architect about their needs and opinions, and thus directly involved in the design process (see case study Les Habitations "Le Retour à l'école", pp. 152).

and the nature of the original use. The design challenge is to reveal the new residential nature on the façade, while integrating it harmonically with building's original character. The problem is intrinsically intuitive and giving general recommendations is not an easy task. Results depend greatly on designers' sensibility, talent, and skill. The best answer has to be found for each individual case.

Existing solutions, as will be seen in Part 2, vary from complete façade conservation with minimal intervention, perhaps adding only discreet residential elements, all the way to the transformation of old buildings so extensively that they lose their original character and after adaptation appear to be newly constructed residential buildings. In most projects, the new residential nature is generally expressed through new windows design and through the addition of balconies, window boxes and railings.

#### 1.5.4.2. New Residential Facade Features

#### 1.5.4.2.1. Windows

Windows are most likely to be identified as the most important character-defining feature of a building. For example, multi-paned sash windows are typical of 19<sup>th</sup>-century Montreal architecture and are still found, especially on industrial and religious buildings. Although rather simple decorative elements, they strongly define a building's character.

Due to decay and poor heat control, updating the performance of the original windows is a necessary intervention in practically all projects. This usually involves complete windows replacement, even in cases where they are in sufficiently good shape and where a more appropriate solution would be to repair them.<sup>94</sup> In many cases, inexpensive contemporary metal frame windows (much more thermally effective than the old ones) are installed, causing significant damage to the building's image. Recently, in a more positive trend, greater attention is being paid to the choice of the new fenestration. Designers now usually opt for custom made windows which emulate the scale, form, and character of the original windows.<sup>95</sup>

The original fenestration treatment should follow the same rules as the treatment of any other original elements. If replaced, after strongly considering their possible reparation, they should be either

<sup>&</sup>lt;sup>94</sup> "Historic window units should be retained rather than replaced. The need for improved thermal performance is best met with interior or exterior storm windows rather than new sealed double or triple sealed units. Frequently, historic windows which have deteriorated only slightly over a hundred years are being replaced with modern units which have life expectancies of twenty or thirty years. Such substitution makes no sense from a life-cycle costing point of view, and the impact on heritage character is often substantial... The use of divided sash ensured traditional windows played a significant aesthetic role... Heritage character is best protected by the repair and upgrading of original or early windows units... When replacement is required, new units should match the material, profile, and detail of the original. This approach maintains heritage character and maintains compatibility with surviving examples of original sash" (FHBRO *Code of Practice*, Intervention Guideline 7.3, p. 43).

<sup>&</sup>lt;sup>95</sup> The main recommendation of the American Standards regarding new window design is that "the replacement windows may be an accurate restoration using historical, pictorial and physical documentation; or be a new design that is compatible with the window openings and the historical character of the building." The following interventions are discouraged: 1) changing the historical appearance of windows through the use of inappropriate design, materials, finishes or colours which radically change the sash, depth of reveal and muntin configuration; the reflectivity and color of glazing; or the appearance of the frame; 2) retrofitting or replacing windows rather than maintaining the sash, frame and glazing; 3) removing a character-defining window that is un-repairable and blocking it in, or replacing it with a new window that does not convey the same visual appearance (*The Secretary of Interior Standards*, in Preserving Our Heritage, p. 75).

restored to the original state or, in case of the new design, the original character should be perpetuated as much as possible—more contrasting solutions being a particular designers choice and responsibility..

A major dilemma in the new windows design is whether to reveal the buildings' new residential nature or to keep to the original aesthetic. Although the alteration of the original features is not recommendable from the preservationist standpoint, the possibility of expressing a residential character should be considered, keeping in mind that the residential touch can be achieved not only through the alteration of the original elements but also by adding certain minor residential features—e.g. window box or window guard (railing), as in French windows.

Old windows are normally replaced with technically superior models, whose design in positive examples reveal the efforts to maintain part of the original aesthetic. For example, keeping some form of sash subdivision perpetuates the aesthetic of the original multi-paned small-scale subdivided window sashes. In a typical case, the scale of the glass panels is enlarged, conjuring up a new residential character of the interior while saving part of the industrial aesthetic.

There are also examples of successful original solutions, which play with the original scale, materials and colours that are combined with residential proportions and layouts, as well as with the architecture of the new additions and overall new facade character. The worst solution is when the new design possesses no meeting point with either the building's original appearance or its new nature.<sup>96</sup>

#### 1.5.4.2.2. Balconies

It is not an easy task to appropriately fit the design of new balconies to the most frequently non-residential context of the original façades. Inappropriate design is most often the result of a wrong choice of materials, aesthetic, scale and proportion. Most often compromise is made in the form of light metal-frame balconies, with a dominant industrial aesthetic—already established as one of the components of the loft imagery. Neutral on the pattern of industrial artefacts, basically compatible with any context, they are achieving the impression of compatibility especially with the industrial nature of the great part of the converted buildings. In less successful cases, balconies and terraces are carved out from the buildings' structures, destroying their original architecture, changing their shape and character, and unbalancing their composition.

#### 1.5.4.3. Design of Residential Adaptive-use Units

At the very beginning, before proceeding with a discussion on appropriate organisation of residential functions, it has to be emphasised that unit design not only involves the successful accommodation of the new use,<sup>97</sup> but must also deal with preservationist concerns. It is imperative to preserve interior heritage

<sup>&</sup>lt;sup>96</sup> Such negative Montreal examples, motivated mainly by economic and practical aspects and characteristic of the initial phases of its adaptive-use practice, will be shown in the case studies comprising Part 2.

<sup>&</sup>lt;sup>97</sup> "The original use of a heritage building is often reflected in its design and detailing. The siting, façade treatment, entry sequence, treatment of public spaces, and overall layout may all relate to intended use and occupancy... If original use is

#### 1.5. Housing Issues Within Adaptive Use

attributes, including original scale and atmosphere.98

Regarding the purely functional issue, due to the predominantly open-plan layout of contemporary adaptive-use units,<sup>99</sup> which are expected to accommodate a variety of residential functions without clear space designation, the achievement of optimal flexibility is a crucial design factor—much more important than in the case of conventional housing with its mostly strictly defined spaces. However, although the open-plan concept is praised for its flexibility, such an approach alone does not guarantee the flexibility of the interior layout.

Usually uninterrupted, well-lit and wide floor spaces in old buildings are inherently flexible. However, subdivision to create individual housing units significantly diminishes their original flexibility. Parallel to space subdivision, there has been, over the last couple of decades, a tendency to gradually diminish units' size, thus eliminating the spaciousness that was the main source of flexibility, while keeping the open-plan layout. The truth is that in many projects, such "loft" units have been reduced to "oversized hotel rooms" (Theodore, 1998), which often cannot satisfy even minimum functional requirements. This is because the number of organisational arrangement choices is directly proportional to the unit size—the larger the space, the larger the number of arrangement options and thus flexibility. Thus, as the available space diminishes the number of options for functional spatial organisation is reduced to the point where functions would inevitably start interfering with each other.

Regarding the open-plan layout, although most positive aspects of the original lofts are frequently indiscriminately attributed only to it (as in Fuller's Geodesic Dome, lofts embody the belief that undefined spaces are ultimately flexible), it must be reiterated that without their oversized interior spaces the original artist lofts would not be able to preserve the flexibility of the original buildings to such a high degree. The secret of the Manhattan artists' solution, more than in employing an integral open-plan layout, was in creating relatively spacious units, able to absorb potential conflict among the particular new functions.

The open-plan distribution of functions, characteristic of the original lofts, differs from the

not possible, related uses should be sought which are compatible with the building's heritage character" (FHBRO Code of *Practice*, Intervention Guideline 2.1, p. 29).

<sup>&</sup>quot;Successful accommodation and space planning will respect and reinforce the original design intentions, and important subsequent patterns of evolution" (*FHBRO Code of Practice*, Intervention Guideline 2.3, p. 30).

<sup>&</sup>quot;A property should be used for its originally intended purpose. If this is not feasible, every reasonable effort shall be made to provide a compatible use which requires minimal alteration. Consideration of new use should begin with respect for existing and original traditional patterns of movement and layout" (Appleton Charter, *Preserving Our Heritage*, p. 57).

<sup>&</sup>lt;sup>98</sup> "An interior floor plan, especially the size, configuration, proportion and relationship of rooms and corridors may be important in defining the historic character of the building. Caution should be exercised not to radically change characterdefining spaces or obscure, damage or destroy interior features or finishes" (*The Secretary Of Interior Standards*, in *Preserving Our Heritage*, p. 61).

<sup>&</sup>quot;Heritage character within the heritage buildings may reside in important interior spaces, features, finishes and patterns of circulation and use. If significant, these should be respected in proposed alterations" (*FHBRO Code of Practice*, Intervention Guideline 3.2, p. 31).

<sup>&</sup>lt;sup>99</sup> Apart form the clearly designated service core (kitchens and bathrooms), usually placed along the corridor walls, the most common solution is still to avoid prescribing a specific function to the spaces (Tashima, 1998, pp.26-7).

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organization of conventional housing where functions are separated by division walls. Being expected to ensure the performance of conventional housing, apartments in converted buildings had often been subdivided into functionally separate spaces (rooms). This resulted in a sort of hybrid between the loft and a conventional apartment which, as a logical response to the character of the original space, kept certain features inherited from the loft scheme, such as higher than usual ceilings, abundant fenestration and, to a different degree, oversized spaces.

This hybrid concept, currently being employed in a significant part of adaptive-use projects, is quite reminiscent of the unit arrangement in New York's studio apartment houses: their double height studio spaces share many common points with the artist lofts, while some of the living functions are clearly designated in separate rooms. It is exactly this combination of loft-like studio/living room and conventionally organised rest of the space that holds the potential for application in the present-day adaptive-use design

Thanks to the fact that much larger spaces than would have been determined by conventional standards were assigned to them, residential functions in the original open-plan loft-concept were well synchronized with both each other and studio work. Insisting on the same scheme in smaller spaces creates only confusion, with adjacent functions overlapping and interfering with each other instead of achieving the desired loft effect of egalitarian and spontaneous space arrangement. The logical conclusion is that, when opting for the open-plan layout, efforts should be aimed towards creating the most spacilous and well-proportioned units possible.<sup>100</sup>

<sup>&</sup>lt;sup>100</sup> It is hard to satisfy completely the need for diversity of adaptive-use unit types by offering few, in some cases only one or two, different unit models. In exceptional cases some specific client demands may be satisfied if they are expressed during the design process, or even during the construction phase of the project—for example, joining two or more units into one (see case study Darcy McGee, pp. 134-6).
# **1.6.** Chapter 6: Architectural Preservation in Montreal

#### 1.6.1. Development of Montreal

Montreal today is a city with a clear pattern of streets and squares, while its architecture exhibits many aesthetic and technological vogues—the main ones being Victorian, Art Nouveau and Modernist.

The urban grid of Montreal, composed of elongated blocks and narrow lots, has its origins in the cadastral divisions used in the French regime. After the demolition of its old walls in the early nineteenth century, Montreal entered a new phase in its development. Its privileged geographical location and the opening of the Lachine Canal created unique conditions for impressive development. The city expanded along the river and along St. Laurent Street to the north.

Manufacturing activities established themselves close to downtown, with the garment industry spread along St. Laurent Street, furriers concentrated around St. Alexander and Major Streets, and printing on St. Alexander. Other industrial zones were distributed along the river, while the greatest concentration of factories in the metropolitan area ran along the Lachine Canal.

Working-class neighbourhoods clustered around these industrial zones, while north of Sherbrooke Street, from the Plateau Mont-Royal to Notre Dame de Grâce and encircling the mountain, huge residential areas were built to house not only the new waves of workers but also a substantial number of middle- and upper-class families The new town that resulted in the 1860s and 1870s at the foot of Mount Royal was a blend of row housing, large residential buildings, and religious estates.

The growth process accelerated at the end of the 19<sup>th</sup> and early 20<sup>th</sup> centuries. Between 1880 and 1930, a ring of smaller suburban municipalities surrounded Montreal, and the centre became denser as buildings grew in height. Throughout this period the grid outside the downtown area remained stable and the layout of the city, unlike certain American cities, was not altered by the introduction of a system of parks and boulevards or by the creation of a monumental civic center. Important streets like Sherbrooke and St. Denis have instead been chosen as sites for the representative and monumental buildings housing important cultural and educational institutions.

Numerous warehouses were built in the last decades of the nineteenth century, especially in Montreal West and Griffintown, while department stores appeared along the St. Catherine Street following the boom in retail trade in the 1890s. The early part of the 20<sup>th</sup> century was marked by the construction of many office buildings, multi-tenant commercial buildings and large loft-style buildings.<sup>101</sup>

In the few decades following the end of WWII, the physical structure of Montreal changed drastically. Large sections of the central residential neighbourhoods became the object of urban renewal

<sup>&</sup>lt;sup>101</sup> This brief review of the Montreal pre-WWII evolution has been extracted from the introduction to the book *Montreal Metropolis*.

policies. The introduction of highways and parking lots that were created at the expense of the existing built context, caused irreparable ruptures in the city structure. Many of the old buildings were demolished as a result of new zoning regulations and a lack of awareness of the value of the city's traditional urban fabric and context. Newly constructed high-rises, also built mainly at the expense of traditional urbanism and architecture, changed the city skyline. Introduced in the tightly knit city fabric of residential neighbourhoods, they exhibited little of the necessary urban sensibility.

#### 1.6.2. Preservation in Montreal: 1928 - 1960s - Today

The first Canadian preservation law, the Quebec government's *La Loi sur Monuments*, was adopted in 1928. According to this law only monuments of exceptional architectural value were considered worthy of preservation. A few decades later the provincial government created a ministry of cultural affairs and passed the Cultural Properties Act in 1972 (*Deshambault Declaration*). Preservation practice adopted new criteria that protected a wider range of buildings. It also designated whole sites, streets, neighbourhoods, and entire sectors of the city (e.g. Old Montreal), as valuable assets to safeguard for future generations.



**Fig. 15. The Van Horne mansion** Built in 1869 and demolished in 1973 (Photo Jensen, Steve, The Gazette) (Gabeline, 1975, p. 21)

In the 1960s and 1970s, echoing the maturing of the preservationist conscience in other countries, public pressure was directed against the destruction of the built environment under policies of urban renewal and the ongoing demolition/construction campaign in general. Different groups opposed the demolition of various buildings and neighbourhoods—the best known examples being the Cité Concordia project, which involved the demolition of an entire working class neighbourhood, and the demolition of the Van Horne mansion (Fig. 15). The latter was the breaking point, causing an unprecedentedly strong public reaction, triggering the process of a gradual adoption of a new attitude of respect for the existing built environment.

The attitude towards architecture in Montreal finally changed in the 1980s. After a few decades of intense construction and uncontrolled demolition, the transitory spirit of contemporary design was replaced with a nostalgic return to a time when buildings were durable and substantial. The architectural heritage started to be treated with more concern and preservationist practice, especially adaptive-use, became an important urban issue.

#### 1.6. Architectural Preservation in Montreal

#### 1.6.3. Adaptive use in Montreal

Like the majority of North American cities, Montreal went through a period of transformation after WWII, which directly influenced the development of its adaptive-use practice. First, the general industrial decline and the departure of industries to the suburbs led to the obsolescence of its inner city industrial building stock. Second, the demographic structure of the inner city changed drastically. Following the movement of industries to the suburbs, a significant portion of the population migrated from the central city. This, coupled with the secularization of society, the declining birth rate and the changing structure of the family nucleus, were among the reasons that so many institutional buildings were left vacant.

The service sector replaced disappearing manufacturing activities. The urban population changed to predominantly white-collar workers. Professionals holding university degrees, predominantly singles and small families (mostly childless couples), preferred to live downtown. They were attracted by the possibility of living close to their jobs, community services, and cultural amenities. Their increasing need for housing and their particular lifestyle preferences have, during the last couple of decades, been partially met through adaptive use—many of Montreal's obsolete industrial and public buildings thus received new tenants after being converted into residential units.

Montreal's practice of residential adaptive use is similar in many respects to the North American model of residential conversion based on the Manhattan loft-conversion model. Nevertheless, there are some significant differences rooted in Montreal's specific socio-economic conditions. In New York and most large North American cities, artists inhabited derelict buildings before organised development entirely eliminated illegal occupation. In Montreal however loft conversions, influenced by the particular economic and political scene, do not fit completely into this general picture. Montreal's legal conversions had practically no influence on the practice of illegal adaptation. Even today, large numbers of residential units can be found in illegally converted buildings that are zoned for commercial use,<sup>102</sup> while many other buildings remain derelict without demand from either developers or even squatters. Some of the most attractive candidates for adaptive use are left relatively uncontested. The best known examples are important Lachine Canal industrial complexes such as the Northern Electric Complex or the former Redpath Sugar Refinery, until very recently overlooked.<sup>103</sup>

<sup>&</sup>lt;sup>102</sup> The city imposes commercial taxes on these spaces, but some artists are exempted from payment (it is unclear how this is determined). Also some spaces have been given a residential zoning, although this seems to be a random designation left largely to the discretion of individual city inspectors (Podmore, p. 45-6).

<sup>&</sup>lt;sup>103</sup> On adaptive-use proposals for the Redpath Sugar Refinery see footnote 111.



# Fig. 16. Lachine Canal Industrial Heritage

**Top** – Axonometric view showing the three important Lachine Canal industrial complexes: the former Belding-Corticelli Company (top circle), the former Redpath Sugar Refinery (right circle) and the former Norhern Electric Complex (bottom circle) <http://www.sdmtl.org/english/develop/inde x.htm>

Only Belding-Corticelli was reused (see the case study Le Loft Corticelli, pp. 94-5)

Middle – North-west view of the former Redpath Sugar Refinery (Photo: Miller, David, 1985, in Marsan, 1990, p. 87)

**Bottom** – North-west view of the *Northern Electric Complex* (southmost volume of the Belding-Corticelli building is shown in the lower left corner) (Photo: Miller, David, 1985, in Marsan, 1990, p. 87)

# 2. Part 2: Case Studies

# 2.1 Industrial Buildings

#### 2.1.1. Introduction

Montreal's industrial activities started around the port and later spread throughout Old Montreal, along the Lachine canal and the central districts, especially the Plateau. It is in these areas that some of the oldest and most valuable examples of factories, warehouses and commercial buildings are found. Many of them have been adapted for housing. Selection criteria for the case studies was based on both the building's heritage value and its importance for the development of Montreal's adaptive-use practice; besides the most valuable representatives from Old Montreal and the Lachine canal area, some examples from other parts of Montreal, with lower heritage value, have also been examined to gain greater insight into the practice.

Montreal's 19<sup>th</sup>- and early 20<sup>th</sup>-century industrial and commercial architecture represents not only a valuable architectural heritage but also, as witnesses to a crucial period of the Canadian development, possesses important historic value. The indisputable fact as well is that industrial buildings made a crucial contribution to the revival of traditional parts of Montreal and the development of local preservationist and adaptive-use practices.

# 2.1.1.1. Old Montreal<sup>104</sup>

The rehabilitation of Old Montreal started in the 1960s, when much of it became a lively area filled with restaurants, boutiques and galleries. Montreal's artists, following the Manhattan loft-conversion example, illegally transformed the spacious interiors of abandoned, mainly industrial buildings into work-living spaces. The immediate port area, however, continued to be overlooked until the decline of Montreal's shipping industry in the 1970s.

In 1977 the federal government decided to revitalize the Old Port. Their main objectives were to make waterfront accessible to pedestrians and the public in general, and to preserve the historic buildings while partially retaining port functions (Goliger, p. 36). Considering the fact that the Old Port was not only a focus of maritime commerce but was also a market area and focal point for inhabitants from all over the city, the planning model adopted as the most suitable for revitalizing the area was the traditional European urban centre, with its mix of residential and commercial sectors (Goliger. p. 40).

The first adaptive-use undertakings involved the best representatives of Montreal's Victorian commercial architecture—main projects being Les Cours Le Royer, Habitat Place Royale and projects

<sup>&</sup>lt;sup>104</sup> "Setting: Any element of the built environment is inseparable from the history to which it bears witness, and from the setting in which it occurs. Consequently, all interventions must deal with the whole as well as with the parts" (*Appleton Charter*).

along St. Pierre Street. Most of these initial adaptive-use projects catered to well-off clients.

#### 2.1.1.2. Lachine Canal

The most valuable factories, infrastructure of the large corporations that played a central role in the country's progress, were built along the Lachine Canal. Adaptive-use projects, undertaken mainly in 1980s, involved the most important of these surviving structures. The introduction of luxurious condominium projects such as *Le Loft Corticelli*, *Le Cours Charlevoix* and *Les Lofts Sherwin-Williams*, provoked a negative reaction on the part of local working class residents. As a result, a series of lower-cost projects, offering units from a wider price range and securing the diversity of income groups, was built; examples include *Habitations Sherwill* and *Canadian Bag*, as well as *Solin Hall* student housing.

# 2.1.1.3. Original Design Characteristics of Industrial Heritage Buildings in Montreal

The structural systems employed in Montreal's 19<sup>th</sup> and turn-of-the-20<sup>th</sup> century industrial and commercial<sup>105</sup> buildings are mainly based on frames consisting of wooden beams supported by either wooden or cast iron pillars, and masonry in the form of massive bearing interior and exterior walls of brick or graystone. There are also a few reinforced concrete structures in the Lachine Canal area.

The facades of Old Montreal commercial buildings<sup>106</sup> are made predominantly of large greystone blocks, while facades of the factories in Lachine canal area are built of red brick, with the ornamental brickwork and stone details found mainly on cornices and turrets containing emergency stairs. The pilasters marking the buildings' constructive systems accentuate the vertical character of early 20th-century Lachine Canal industrial architecture.

The well-illuminated and spacious interiors and high load-bearing capacity of both Old Montreal commercial buildings<sup>107</sup> and Lachine canal factories achieved a high degree of flexibility that would later prove to be very suitable and attractive for residential use as well.

<sup>&</sup>lt;sup>105</sup> Explaining 19<sup>th</sup>-century commercial architecture in Old Montreal and utilitarian nature of its design, Marsan describes the typical building as "un simple système structural de poutres et poteaux, et, en façade, à une austère ossature de pierre, avec remplissage de verre" (Marsan, 1974, p. 236).

<sup>&</sup>lt;sup>106</sup> "Il est à remarquer que ces façades à ossature de pierre furent employées également dans le cas de vastes structures autonomes, tels, par exemple, les entrepôts des Sœurs Hospitalières de St-Joseph (1866), établis sur les îlots urbains délimités par les rues St-Sulpice et St-Dizier, de Brésoles, Le Royer et St-Paul, et les Bâtisses des Sœurs Grises, érigées en 1871 et en 1874, sur l'îlot borné par les rues Normand, d'Youville, Saint-Pierre et place d'Youville. Le traitement architectural de leurs façades s'avère, pour l'époque, tout à fait remarquable. Les rez-de-chaussée se signalent par la répétition d'arcades vigoureuses, tandis que les élévations sont rythmées à toutes les trois baies, par de puissant piliers maçonnés, qui recoupent les horizontales des planchers. Dans ces édifices se trouvent déjà résumés pour l'essentiel les principes architectoniques qui, à la fin du siècle, feront l'originalité et la force de l'École de Chicago" (Marsan, 1974, p. 239).

<sup>&</sup>lt;sup>107</sup> In Old Montreal, commercial and manufacturing functions often mixed together in the buildings designed to accommodate a variety of uses: "Elles réclament désormais des espaces présentant un minimum d'obstruction et aménageables à volonté, que ce soit pour des ateliers de confection, de fabrication de meubles, de chaussures ou d'objets de cuir, avec leurs machines de toutes sortes, que ce soit pour le commerce en gros ou pour l'entreposage, ou encore pour loger des fonctions administratives avec leurs structures opérationnelles de plus en plus définies et impératives. A ces demandes d'espace, la réponse des constructeurs est le plan libre, qui, grâce a une structure de poutres et de colonnes, offre un minimum d'obstruction et un maximum de flexibilité, et la façade de verre, qui laisse pénétrer tout l'éclairage naturel possible. Il s'agit donc d'une réponse pratique, claire, et sans prétention" (Marsan, 1974, p. 2236-37).

#### 2.1.1.4. Developing former industrial zones

Once vital production zones such as the Lachine Canal area, Pointe Saint Charles, and to a lesser degree the Plateau, are today an unregulated mix of significantly decayed structures still sheltering scattered manufacturing, industrial and commercial activities, as well as housing—mainly in form of illegally converted loft-units. A significant part of the industrial labour force continues to occupy the surrounding neighbourhoods and opposes the introduction of residential—particularly adaptive-use—projects within the former industrial sites.

That development in former industrial areas should be public and must provide local people with new jobs was expressed in the urban plan adopted in 1992, after years of public consultations<sup>108</sup> (Gyulai, 1999). The plan designated the Lachine Canal area exclusively for light industry, with a narrow strip along the canal for recreational purposes. However, this plan did not eliminate divergent opinions that could be heard in the public discussion about an appropriate development strategy for the Lachine area.

Three often-cited reasons against residential adaptive-use projects are:

1) further expulsion of industry reduces local employment opportunities;

2) converting factories into housing is a catalyst for gentrification, which drives up land value and increases property taxes;

3) negative social aspects of segregation based on the different financial status introduced by new higher income residents.<sup>109</sup>

However, despite the opposition, a tendency towards zoning change, further expansion of new construction and adaptive-use projects in keeping with the "evolution of the city,"<sup>110</sup> seems certain.<sup>111</sup>

<sup>&</sup>lt;sup>108</sup> In 1982, similar attitudes, such as concern for the needs and preferences of the local populations, as well as an accent on the integration of the heritage buildings into the people's life instead of some more exclusive designation, were expressed in Quebec's *Deschambault Declaration*:

In using our heritage, we must preserve or reintroduce everyday life rather than the artificial life of museum and tourist centres. Preference should be given to traditional occupations; and we must, in any case, respect the needs and legitimate aspirations of the inhabitants, even if this requires us to adopt uses that are different than the original uses (Article IX-A).

In other words, it is necessary to encourage respect for the established rights of the local population. The housing function should take precedence over all other uses and be given first priority (Article IX-B).

<sup>&</sup>lt;sup>109</sup> Mostly older than 10 years, the Lachine Canal's adaptive-use projects do not indicate negative effects on the area; many empty industrial buildings in the immediate vicinity still stand empty and the introduction of residential use in this recreational-industrial zone only seems to have contributed to the liveliness of the neighbourhood. Considering the attractiveness of the locations and precarious state of the heavily decayed monuments, it seems logical that initiative should be taken more in the direction of providing protection for the architectural heritage as well as accentuating and exploring the cultural and other advantageous capacities of the Lachine canal area as a potentially important public and recreational zone.

<sup>&</sup>lt;sup>110</sup> Expression used by Montreal Mayor Pierre Bourque commenting on the 1992 urban plan (Lévesque, 1999f).

<sup>&</sup>lt;sup>111</sup> The debate for and against adaptive use projects along Lachine Canal seems to have reached its culmination, or at least its most illustrative point, in the dispute on the future of the earliest industrial relic of the Lachine Canal—the former Redpath sugar-refinery building (adjacent to the 1989 *Le Loft Corticelly* project—pp. 94-5). In almost every case, old buildings raise issues involving local politics, profit interest, location, land value, and the prestige brought by heritage value. These interfere directly with purely preservationist concerns. Two main proposals best illustrate the dilemma which has existed since the beginning of the de-industrialisation of the area—whether to change the zoning to allow residential use or to maintain the area's status quo with its exclusively industrial zoning. The proposal for former Redpath refinery that implied a zoning change, envisioning the residential units on the upper floors and commercial space on the main floor, prevailed over the proposal to



Fig. 17. Le Cours le Royer Top - Isometric view (Sheppard, 1990a) Bottom - Map of the complex (*Les magasins*, p. 9)

#### 2.1.2. Le Cours le Royer

In 1858 the Religeuses hospitalières de Saint-Joseph moved the old hospital Hôtel-Dieu from the center of the city to its present location on Avenue des Pins. In its place they developed a commercial-warehouse enterprise to fund the construction of the new hospital<sup>112</sup> (Pinard, 1987, vol. 4, p. 263). The result was a warehouse-commercial complex (Fig. 17), a set of neo-Renaissance style buildings (typical of the second half of the 19th century), with a high bearing capacity and highly flexible interior spaces that allowed a variety of tenants and uses-mostly commercial and manufacturing. It was envisioned to play a mercantile role in the (at that time) lively Old Montreal community (Sheppard, 1990a).

Notable in the original architecture were unusually large fenestrated facades with massive limestone pilasters (piers), ground floor arcades, ornamented cornices and mansard roofs with dormers. Comparing this complex with other industrial buildings of the same age reveals atypically low floor-to-ceiling heights.

Façade piers, interior bearing brick walls and columns (wooden or cast-iron—depending on the building) support wooden floor structures. The interior binary columnar rhythm is translated into a ternary rhythm of pilasters on the facade using the constructive solution of splitting the beams in two from the outermost columns and transferring the load onto two facade pilasters separating the windows (Fig. 18).

preserve the building's public vocation and convert already significantly decayed structure into a small businesses, high-tech production studious and a museum on the canal's history (Lévesque, 1999). This decision was criticized by the community and heritage groups, who argued that private development will eventually cut public access to the canal as well force up rent in the area, beside the strategic shift in the treatment of the entire region that opens the way to the area's fundamental transformation. On Redpath Refinery adaptive-use proposals also see: Cantin, 1999; Gauthier, 1999a, b; Gyulai, 1999; Lambert, 1999; Lévesque, 1999a, b, c, d, e, f; Noël, 1999; Nolin, 1999; Theodore, 1998b. <sup>112</sup> A 10-bay building along Rue St-Paul was developed in 1861. In 1871, an eleven-bay building was constructed

<sup>&</sup>lt;sup>112</sup> A 10-bay building along Rue St-Paul was developed in 1861. In 1871, an eleven-bay building was constructed opposite to the existing one, thus creating Le Royer Street between them. The complex was concluded in 1873-4 by adding another twelve bays along the east side of Saint-Dizier Street and the north side of Brésoles Street. The original architects were Victor Bourgeau and Michael Laurent (*Les Magazines*, pp. 97-107).



#### Fig. 18. Le Cours le Royer: constructive system

Top – Axonometric view of the volume 2, depicting its structural system (Pinard, 1987, vol. 4, p. 267) Bottom left – Drawing depicting original interior. Visible is woodwork on ceilings that had to be stripped (compare with the image on the right). 'Y' beam permits transmission of the load from single interior column to two façade piers (Michaud, 1991, p. 45) Bottom right– Interior view showing one finished unit before the occupation. Structure was left visible. Tenants had a chance to individually choose floor finishes (Pinard, 1987, Vol. 4, p. 271) This maximized fenestration to an unusual degree, considering the limitations of the constructive techniques employed.

Fires and functional requirements caused a number of alterations during the lifetime of the complex—e.g. loss of part of the mansard roof on Block I (vol. 2 on the map) and three storey additions on Block III (vol. 1 on the map) (Fig. 17). The buildings have also a history of minor modifications to better accommodate new tenants, such as openings in the interior bearing walls that had separated adjacent spaces. The complex had become completely obsolete by the beginning of the 1970s.<sup>113</sup>

The initiative for the adaptive-use project came from the architects who conceived the idea, and later designed, built, managed and marketed it. Later on, the three levels of government, as well as Canada Mortgage and Housing Corporation, provided support mainly by subsidizing façade work.<sup>114</sup>

This adaptive-use intervention transformed the complex buildings into 200 housing units distributed mainly on the upper floors, while the first two floors were mainly left to commercial and office use. Residential units vary in type from building to building; depending on the model, they may occupy one or two bays and one or two storeys (two-storey apartments are located on the top floors and connected with rooftop atriums—Figs. 19 and 20). Their size range is 110-325 sq. m. Access to the units is provided by double-loaded corridors which share their walls with the units' bathrooms and kitchens. The underground garage was placed below the elongated Le Royer Street, which later became a semi-

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<sup>&</sup>lt;sup>113</sup> The lessees varied from British troops (1861-1869), a sleigh and harness factory, Salada Tea, and numerous other manufacturing enterprises. The last lease was negotiated in the 1974 with the Reich Brothers Ltd (Pinard, 1987, vol. 4, p. 266).

<sup>&</sup>lt;sup>114</sup> In the first three phases of the adaptive use project, two main volumes on each side of Le Royer Street and a small wedge-shaped volume on the eastern side of the St. Dizier Street were executed by an architectural firm *Desnoyers, Mercure, Gagnon, Sheppard* in the period between 1975 and 1978). The subsequent phases were designed by Architect Claude Gagnon and executed by development firms who acquired and developed the remaining buildings and land (Sheppard, 1990a).



Fig. 19. Le Cours Le Royer: unit types Top left – Corner unit Top right – Two-storey unit with a roof terrace (middle) Bottom – Two typical onebay units (Sheppard, 1981)







private pedestrian area (Fig. 21).<sup>115</sup>

Interior interventions included the gutting of all non-bearing interior partitions, stairs, doors, windows, mechanical services and suspended ceilings. The elaborate woodwork on ceilings was so decayed it had to be eliminated, revealing the wooden structural grid (Figs. 18 and 20). Masonry was cleaned, while openings in the bearing walls separating the bays, carved up by tenants over the years, were sealed up. Partitions in new units were created using gypsum wallboards. The high bearing capacity of the floors-four times that required for residential purposes-allowed the placing of a new concrete floor slab over the original wooden floors which were damaged and uneven, improving sound insulation and fire protection (Sheppard, 1990a and Sheppard interview, Nov. 15, 1999).

Regarding treatment of the exterior of the buildings, a respectful attitude towards the original architecture was dominant. Original features on the facade were preserved as much as possible—the

façade was in general only repaired and cleaned. While some of the original ground-floor windows were repaired and refurbished, most of the original wooden window frames were substituted with accurate replicas. Contemporary thermal glazing and new hardware were installed (Sheppard interview, Nov. 15, 1999). The metal grills introduced in front of the windows (French window) revealed the new residential nature without interfering with the original character of the façade (Figs. 21-26).<sup>116</sup> Unusually abundant fenestration, equal on all sides, neutralized the initial concern that the unusually low floor-to-ceiling heights, atypical for this building type, would not allow adequate interior illumination.<sup>117</sup> The final result

<sup>&</sup>lt;sup>115</sup> The original idea was for a garden to be the starting point for the development of a larger network of pedestrian open public spaces (Sheppard, 1990a).

<sup>&</sup>lt;sup>116</sup> During the initial design phase, architects actually considered the possibility of returning the building to this original state. They pondered whether to demolish the two floors added to the southern volume (vol. 1 on the Fig. 17 map) (Sheppard, 1990a). The wise decision of leaving the situation as it was, instead of destroying significant part of the existing architecture in attempt to restore the structure to the original state of buildings conception, proved farseeing.

<sup>&</sup>lt;sup>117</sup> "Initially, buildings seemed too deep for housing" (Sheppard, 1990a). Although lower floor-ceiling heights usually mean shallower penetration of light into spaces, in this case the buildings were not so deep as to create poorly illuminated interior spaces (see plans and interior images).



Fig. 20. Le Cours le Royer: interior views Top left – Interior view of the typical volume 2 unit (Kandalaft, 1981, Photo: Poissant, R) Top right – Interior of the typical two-storeys unit with cast iron columns (Sheppard, 1990a) Rest of the images – Interior views of the typical volume 1 unit <http://www.canoe.qc.ca/maisondeco/dc0101\_p80a\_01 31-can.html> is that not only had the units sufficient light but slightly lower ceiling heights actually proved to be beneficial by helping buildings to be aesthetically more easily identifiable with the new residential use—thus reducing the common problem of discrepancy between original industrial facades and the new residential nature of the interior.

The Le Royer complex has more than convincingly proved its adaptability over its lifespan to date. By frequently changing functions, including its current housing/commercial mix-use nature, it demonstrated the flexibility of over-dimensioned buildings, in both the sense of structural strength and that of interior spaciousness, thus extending the idea of flexibility to the structural aspects of buildings.

This is a crucial project that contributed much by imparting new attention to Montreal's architectural heritage. Although an experimental, pioneering endeavor, the project has been characterized by an appropriate preservationist approach which can be summarised as a respectful attitude towards the original architecture. It paved the way for subsequent projects and influenced the entire adaptive-use practice in Montreal. Its success proved that such projects are not only possible but also beneficial from both a preservationist and a pragmatic perspective (Sheppard, 1990a). Even today, after more than two decades of Montreal's adaptive use experience, this project can be considered correct in the preservationist sense, its reputation alone as a prestigious residential block bespeaks its housing qualities.



**Fig. 21. Le Cours le Royer Street after the completion** Le Royer Street transformed into public pedestrian space; view from the east (Photo 1998)



Fig. 23. De Brisoles and Saint-Sulpice Streets (southeast corner) Left – Photo 1978 (*Les Magazins*, p. 105) Right – Photo 1998



Fig. 22. Le Royer and Saint-Dizier (northeast corner) Left – Photo 1978 (*Les Magazins*, p. 104) Right – Photo 1998



Fig. 24. Le Royer and Saint-Sulpice Streets (southeast corner) Left – Photo 1978 (*Les Magazins*, p. 103) Right – Photo 1998



Fig. 25. Le Royer and Saint Sulpice Strets (northeast corner) Left – Photo 1978 (*Les Magazins*, p. 107) Right – Photo 1998



Fig. 26. Saint-Paul and Saint-Sulpice Streets (northeast corner) Left – Photo 1978 (*Les Magazins*, p. 101) Right – Photo 1998

#### 2.1.3. Revitalization of the St. Pierre Street

The section of St. Pierre Street between Place d'Youville and Rue de la Commune, delineated by the remnants of the *Hôpital général des frères Charon*, and Victorian commercial buildings, represents, from a heritage viewpoint, an especially attractive section of the Old Port area (Fig. 27).



# Fig. 27. St. Pierre Street historical complex: map of the area

Adaptive-use projects were introduced into warehouse volumes A, B, C and E (Goliger, 1982. p. 35)

Originally Hôpital général des frères Charon, the three-winged volume north of the volume E has been transformed into residences for nuns as a part of the adaptive-use project Maison de Mere d'Youville. In 1981, nuns also adapted a warehouse structure on the northwest corner of St. Pierre Street and Square d'Youville

Encircled detail marks the 17<sup>th</sup> century remnants believed to be part of the original structure of the anncient *Hôpital général des frères Charon* built in 1692

In the 1970s, a hundred years after the relocation of the hospital and the building of the warehouses,<sup>118</sup> this area became the focus of a local preservationist debate over whether to reconstruct the ancient hospital, demolishing the warehouses, or to preserve these 19<sup>th</sup> century commercial structures, which—over more than a century of their existence registering socio-economic changes and changes in the functional and formal character of the port area—had also gained significant historical and documentary value. The discussion on the destiny of the St. Pierre Street warehouses was perhaps the best example of the continuous preservationist dilemma in Montreal whether as to give preference to the older at the expense of the newer structures, which had accumulated an architectural and historical importance of their own.

These buildings could not be simply ignored or demolished for the sake of "a building [17<sup>th</sup>-century hospital—Fig 31. top two] of questionable merit that had existed there for a mere 40 years"<sup>119</sup> (Sheppard, 1984). The adopted solution—proposed by the City Planning Department, *Heritage Montreal* and several architects who later did the design work—envisioned the adaptation of warehouses for residential use, mixed with a variety of commercial programs. Among the first of this type in Canada, these undertakings were intended to serve as demonstration projects and catalysts that would eventually stimulate private development in Old Montreal as well as the waterfront areas of other Canadian cities (Goliger, 1989).

<sup>&</sup>lt;sup>118</sup> Periodical floods and development in the area as a result of Montreal's increasing importance as an international port city, forced the Grey Nuns, the Mère d'Youville Order, to relocate their hospital to the present location on René Lévesque Blvd in 1870. Soon after that the nuns built warehouses on both sides of St. Pierre Street (Sheppard, 1984).

<sup>&</sup>lt;sup>119</sup> "To what source does one go back when dealing with historic preservation? Should one eradicate the successive layers of history for the sake of archaeological exactitude?" (Sheppard, 1984)

#### 2.1.3.1. Maison de Mère d'Youville

After an absence of more than a century, the Grey Nuns returned to inhabit their old buildings. In 1977, they began the revitalization of St-Pierre Street with the adaptive-use project *Maison de Mere d'Youville*, involving the remaining *Hôpital Général* wing (Fig. 28, top) and the warehouse on the southwest corner of St. Pierre and Place d'Youville (Fig. 28, bottom) (Goliger, 1989, p. 38). While the hospital building was minimally altered, the main interventions on the warehouse included the introduction of a new corrugated metal cornice and replacement of the multi-paned original fenestration with modern windows with large glass panels.

A series of similar projects followed. After purchasing volume E (Fig. 29) from the Grey Nuns, CMHC (Canada Mortgage and Housing Corporation) undertook its adaptation in 1981, under the name *Le Cours St. Pierre*. At approximately the same time, on the other side of the street, *Les Cours Le Callière* project (volumes A, B and C) (Fig. 30) was undertaken as a private development.



#### Fig. 28. Maison de Mère d'Youville

**Top** – Hôpital général des frères Charon. Photo before the 1977 adaptation (left) (*Dossier on Pointe-à-Callière*, p. 9) And after the adaptation (right) (Photo 1998)

**Bellow** – Warehouse on the northwest corner between St. Pierre Street and Square d'Youville. Photo before the adaptation (left) (*Dossier on Pointe-à-Callière*, p. 16) and after (right) Photo 1998











# 2.1.3.2. Le Cours St-Pierre<sup>120</sup>

Besides housing, this mix-use project also included a variety of other functions. An alcoholics' clinic is accommodated on the second floor. The basement and part of the ground floor were reserved for the museum Marc Aurèle Fortin. The rest of the ground floor was left for commercial uses.

With the exception of the crumbling interior brick walls and the porous nature of the mortar on the northern brick façade, the structure, consisting of massive exterior stone block pilasters and interior brick bearing walls supported by wooden beams and cast iron columns, was reused without major problems.

Major interventions included: stripping of the interior to its bare structure and carving out the rooftop courtyard from the central parts of the two upper floors providing light, ventilation, and an opportunity for the introduction of an outdoor communal terrace, semiprivate patios—and even inward oriented balconies.

All newly introduced residential units vary slightly in design, adding to the feeling of originality of space. Some of them

Fig. 29. Le Cours St-Pierre

**Top two** – Drawing 1883 (Les Magazins, p. 21) and photo 1998 **Below** – Interior during adaptation (Goliger, 1982)

**Below right** – Rooftop courtyard (Golliger, 1982) **Bottom** – Two interior views of the residential units (Golliger, 1982)

<sup>&</sup>lt;sup>120</sup> Michael Laurent did the original design of this 1873 shoe factory; the adaptation designers were architects Desnoyers, Mercure and Safdie (*Les Magazins*, p. 20; Duret, p. 111).

occupy two storeys, others have skylights, while some have inwardly oriented balconies and patios created within the new rooftop courtyard. The original character of the interior spaces (what was left after carving out a large part of the building's core in order to create the courtyard) has been well preserved; the original structural components and materials were left visible and properly integrated in the new interior. Although the units lack such features as air-conditioning-in keeping with CMHC housing programs-they nevertheless have the characteristics of luxurious housing.

Although there were no significant exterior additions, the specific architectural expression of this exceptional heritage building was altered and much of its original character erased when a new corrugated metal cornice was introduced and its original wood-framed windows with multiple lights were replaced by ill-proportioned modern aluminium frames.

## 2.1.3.3. Les Cours de Callière<sup>121</sup>

Mixed-use project Les Cours de Callière (Fig. 30), undertaken by private developers and completed in 1982, involved the entire eastern side of St. Pierre Street—warehouse ensembles A, B and C. Volumes A and C were transformed into a complex consisting of 69 luxurious condominium housing units, while volume B was demolished and rebuilt, resulting in 41 affordable residential units. The lower floors accommodated number of office and commercial spaces.

Volume A is a row of 11 warehouses (bays) (Fig. 30 - top). While the structure was reused, the old mansard roof, one of the last surviving examples of this pre-1880s feature,<sup>122</sup> was demolished. A new two-storey roof structure with dormers, clad with corrugated sheet metal, was built instead. Evident is the designers' intention to reinterpret and stylise original features using contemporary materials and forms. However, the result is questionable. Beside the demolition of the original mansard roof----an invaluable historical feature-more than problematic from a preservationist point of view, the design of the new roof volume, through its scale, style and material choice, greatly altered the original building's character and proportions. The introduction of new fenestration in the form of contemporary aluminium window frames with large glass panes, replacing the original wood-frame windows with multiple panes, further altered the original nature of the building.

An even more radical attitude was adopted for the adjacent volume B (Fig. 30 - middle). Facing the options of either preserving the facade while rebuilding or repairing the decayed and structurally unsound warehouses, the designers opted for their complete demolition and replacement with two

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<sup>&</sup>lt;sup>121</sup> The architect of the original 1874 buildings was Michel Laurent. The adaptive use-project designer was Architect

Emile Leziy. <sup>122</sup> "Le toit de ces édifices commerciaux semble avoir également retenu l'attention des constructeurs. Ainsi, lorsque le bâtiment se termine par un toit mansard, des lucarnes à forte projection le signalent au passant. On constate la même chose dans les édifices qui flanquent le côté est de la rue St-Pierre, entre la rue d'Youville et la place du même nom. Mais comme le toit mansard représente une perte d'espace, dans une structure dont l'espace sera monnayé, et comme l'emploi de goudron, qui permet les toits plats, se généralise aux environs de 1880, c'est le toit plat que s'impose rapidement ; plusieurs toits mansards seront tout simplement transformés en étage supplémentaire" (Marsan, 1974, p.240).



**Fig. 30. Les Cours de Callière Top** – Volume A: Photo before the adaptation (left) (*Les Magazins*. p. 132); Photo 1998 (right) Middle - Volume B (marked by the dashed lines): Photo before the demolition/redevelopment intervention (left) (Dossier on Pointe-à-Callière, p. 12); New structures after the intervention (right) (Photo 1998) Bottom - Volume C: Photo before the adaptation (left) (Les Magazins, p. 133); Photo 1998 (right)

entirely new buildings, introducing a housing co-operative with 41 one- and two-bedroom units. Despite such a drastic approach, the intervention has certain positive aspects. Firstly, introduction of affordable units balanced the new social structure of St. Pierre Street, as established by the rest of its adaptive-use projects comprising almost exclusively luxurious residential condominiums.<sup>123</sup> Secondly, two new structures are in accord with the existing context—being of the same height as that of adjacent buildings, they follow the common street pattern, while their precast concrete facade elements emulate the adjacent forms and rhythm.

Building C (Fig 30, bottom), originally the home of Montreal's old Catholic Sailors Club, has been converted into executive condominiums and boutiques (Goliger, 1989). From the preservationist aspect, in relation to the other St. Pierre Street projects, its treatment was relatively correct. With the exception of new fenestration out of tune with the original, the exterior of the building (including the roof volume) has been thoroughly preserved.

#### 2.1.3.4. New Architecture Insertions

As can be seen, the new volume B (Fig. 30, middle) attempts, and to a certain degree manages, to fit into the existing setting. This is not however the case with all new architecture insertions within the St. Pierre Street complex. There are two one-storey structures that stand completely out of context. The first is between the eastern Hospital wing and the warehouse on the northwest corner of St. Pierre Street and Square d'Youville (Fig. 31, middle two) and the second one is between the Volume E (corner between d'Youville and Normand Streets) and the southern Hospital wing (Fig. 31, bottom). Both built in the same manner, they differ from the adjacent buildings in materials, scale and form. Although the design problem to architecturally connect the existing buildings was quite challenging, this does not justify design solutions which are questionable from the standpoint of both proper preservation considerations and the criteria applicable to new architecture. Quite insignificant and lacking their underlying concept and program, these one-storey insertions are not even neutral in expression; erected without the necessary effort to establish a relationship with the original context, they contrast with the responsible and well-elaborated Victorian commercial architecture.<sup>124</sup> Such an attitude reveals a lack of sensitivity and effort, resulting in meaningless structures in conflict with the existing buildings.

<sup>&</sup>lt;sup>123</sup> Les Cours de Callière was subsidized under the non-profit housing program of the National Housing Act and for that reason able to offer low-cost housing (Goliger, 1989).

<sup>&</sup>lt;sup>124</sup> Marsan points out the architectural qualities of the Victorian commercial architecture, and particularly St. Pierre Street warehouses: "On aurait tort, par contre, de considérer ces édifices commerciaux uniquement pour eux-mêmes, et de négliger leur intégration formelle dans les rues ou ils sont ériges. Car il y a fort à parier que les constructeurs, par le traitement architectural des façades, cherchaient à intégrer celles-ci dans le « spectacle » de la rue victorienne. Ainsi, sur la rue St-Pierre, face aux Bâtisses des Sœurs Grises, on retrouve les mêmes arcades aux rez-de-chaussée, et le même rythme du pilier dominant, la toutes les trois baies, que dans les Bâtisses elles-mêmes ; de plus, l'affirmation des lignes horizontales assure l'unité la toute rue [...] Dans presque tout les cas, cependant, on peut avancer que ces façades à ossature de pierre ajoutent au spectacle des rues, soit par leur intégration aux lignes et aux textures dominantes de ces rues, soit encore par une franche opposition à ces caractéristiques" (Marsan, 1974, p. 240-41).





#### Fig. 31. St. Pierre Street historical complex

**Top two** – The surviving remnants of the ancient Hôpital Géneral, part of the original 1692 structure built by the Frères Charon (St. Pierre Street west side—see the map: detail in the dotted line circle). Chapel (Chapelle du Père eternal: 1695-1704) (left) and its sacristy (Sacristie de la chapelle de l'Hôpital general: 1831-33) (right), were conserved (new roof of sacristy was added in 1990) without reconstructing the 17<sup>th</sup> century hospital (Photos 1998 <http://vieux.montreal.qc.ca>)

#### Rest of the images: New insertions

**Midlle left** – New volume (encircled detail), enclosing Hospital Maison de Mere d'Youville courtyard (St. Pierre Street side), connects the two parts of the *Maison de Mere* d'Youville project: the original hospital wing (gabled volume left of it) with the warehouse on its right (Photo 1998)

Middle right - Enlarged new volume detail (encircled in the middle left image)

**Bottom** – New one-storey volume (encircled detail—Normand Street) enclosing the hospital courtyard between *Le Cours Le Calliere* and *Maison de Mere d'Youville* projects (Photo 1998)

Compared with *Cours le Royer*, the interventions on the St. Pierre warehouses involved much greater destruction of the original architecture. Such a significant variation in approach demonstrates the lack of experience and inconsistency in methodology in Montreal's early adaptive-use attempts in the late 1970s and early 1980s as well as the domination of pragmatic aspects at the expense of preservationist issues. Besides the insufficiently developed preservationist conscience, the high degree of alteration to the original architecture, hardly imaginable today to occur, is also an evidence of the lack of an effective system by which to control preservationist and adaptive-use interventions.



Fig. 32. La Cour Notre Dame Main street façade (Photo 1998)

#### 2.1.4. La Cour Notre-Dame<sup>125</sup>

This former warehouse on Notre Dame Street is a rare surviving example of the early 1850s Old Montreal commercial architecture. The main reason for the limited number of similar still remaining examples was their inflexible original design, which did not manage to ensure their utility and thus their survival until the present time. The best proof of this is that 19<sup>th</sup>-century, late subsequent, commercial buildings (illustrated in the previous case studies), which were built with flexibility as a key aim and which despite having many times changed their use are still functional.<sup>126</sup>

This was a pioneering adaptive-use project in the eastern sector of Old Montreal. Besides being an example of an important heritage building preservation, this project is

particularly interesting for being a typical example of facadism (*supra* Chapter 4), which basically recapitulates the project's design strategy and its final result. The significantly decayed building structure required complete demolition, save for the street façade. A new structure, containing eight condominium housing units (one to three bedrooms), was built behind the original façade wall. The old floor-to-ceiling heights were maintained, giving the spacious feeling associated with dwelling in converted buildings. Mezzanines were built on top of the first floor storage spaces (Boileau, P. 262).

<sup>&</sup>lt;sup>125</sup> The former Édifice J.B. Beaudry was built between 1850 and 1855. Address is 433 rue Notre-Dame Est <a href="http://vieux.montreal.qc.ca/cgi-bin/inv/fiche\_bats.cgi?id=0040-69-6584-00&mat=0040-69-6584&per=4">http://vieux.montreal.qc.ca/cgi-bin/inv/fiche\_bats.cgi?id=0040-69-6584-00&mat=0040-69-6584&per=4</a>>. Adaptive-use project was completed in 1984. Architect was C. Scheffer (Boileau, 1981, p. 262).

<sup>&</sup>lt;sup>126</sup> Marsan describes the 1850s as a period when "l'architecture était encore esclave des cloisons et murs portants, et sous la tutelle des styles historiques" (Marsan, 1974, p. 236). Discussing concretely this warehouse type Marsan opens the questions of its flexibility and adaptability: "Car ces « constructions pratiques », pour reprendre l'expression de Giedion, étaient d'autant plus vulnérables que l'on ne leur connaissait d'autres qualités que celles d'être pratiques et exploitables économiquement. Dès qu'elles cessaient de l'être, elles devaient faire place à d'autres, mieux adaptées aux fonctions et aux impératifs de l'économie" (Marsan, 1974, p. 235).



Fig. 33. La Cour Notre Dame Top left – New volume in the rear (Boileau, p. 259) Top right – Plan of a typical unit (Boileau, 1981, p. 261) Bottom left – Interior of a typical unit—living room (Boileau, p. 260)

Bottom right – Interior view—mezzanine (Boileau, p. 260)









Fig. 34. Habitat Place Royale Top – Original facade—drawing (Michaud, 1991, p. 43) Bottom – Photo 1998

#### 2.1.5. Habitat Place Royale

Besides the extremely practical and utilitarian aspects of Victorian commercial buildings in Montreal, there are some Old Montreal examples, especially characteristic of the 1880s, which sought to express the owner's status and impress clientele (Marsan, 1974, 243).

Abandoned for several years, the interior of this gray-stone structure, built in Florentine-palace style, was showing signs of advanced decay and was completely redone during the adaptation<sup>127</sup> (Duret, 1992). This is probably one of the boldest and most unusual adaptive-use projects, at least in Old Montreal, especially in light of its exceptional heritage value and exclusive historic *Place Royal Square* location.

New interventions sharply contrast with the old. The original cornice was preserved, but a newly built roof volume bears little or no allegiance to the original character. Similarly contrasting is the style of the large single-pane windows with aluminium frames, which were inserted instead of the original small-scale subdivided casement windows.

<sup>&</sup>lt;sup>127</sup> This former commercial building, was built in 1855, but its façade (as showed in the drawing from 1873) was built in 1870. The architect was George Brown. The adaptive-use project was done in 1982 by the architectural firm *Desnoyers and Mercure* (Leziy worked on the preliminaries). Forty condominium housing units were created within the old shell and a new structure was built west of it. Underground garage with 30 spaces was built beneath this new structure (Duret, 1992).



The original proportions were significantly altered, and the impression is that new façade character has more to do with a modern office-building image than with either the building's original character or its new residential function. While the roof addition, with its completely contrasting manner, does not interfere with the original shell that is well preserved and still definable despite the modern additions, it is the new fenestration that reduced the building to the appearance of a massive stone façade screening the contemporary structure behind it.

However, although debatable in the respects mentioned above, the design statements are clear and honest in their expression, leaving no doubt about what is new and what is old.



Fig. 35. Habitat Place Royale Interior views of the typical unit <http://www.montreallofts.com/vm39.htm>





## 2.1.6. Dominion Block (AppLoft—1<sup>st</sup> phase)

The original building<sup>128</sup>—one of the first erected on McGill Street—is in many ways similar to the previously discussed Place Royale commercial structure. Both belong to the same period. Adapted with 15 years of each other, these two examples clearly illustrate changing approaches to local adaptive-use practices, and the Dominion Block therefore also deserves a close attention.

When comparing these two projects, an especially important aspect is the way their cornices have been treated. In this case, the designer opted to maintain a century-old visual image. The existing cornice was repaired and the cladding replaced. The original, for Montreal commercial architecture unusual, lavish mansard roof (depicted on an 1873 dráwing—Fig 36), demolished around 1900, was not restored nor, following the example of the Habitat Place Royale intervention, was a roof-top addition introduced.

This approach clearly reveals the effort to maintain as much as possible the existing state prior to the adaptive-use intervention (as the rest of the study will show this was the predominant strategy for many other Montreal projects, which avoided major additions or significant restoration works).

Fig. 36. Dominion Block Top – Drawing from 1873 (*Les magazins*, p. 308) Bottom – Photo 1980 (*Les magazins*, p. 311)

<sup>&</sup>lt;sup>128</sup> The original building was constructed in 1867 and judging by the sumptuous ornamentation, recognizable is the influence of the Second-empire style—especially on its mansard roof which was demolished around 1900 and replaced with simplified cornice (*Les magazins*, p. 310). Building housed a variety of users during its life. After being heavily damaged in the 1983 fire, the roof and upper three floors were repaired a few years later. The actual adaptive-use project, introducing condominium housing units, was completed in 1998 (Duchesne, 1999).



A comparison of the Old Montreal projects illustrates how the interpretation of the original windows has evolved since the 1980s. While initially the original windows were replaced with contemporary commercial fenestration that had little or no connection to the original architectureactually often conflicting with the original buildings' character,<sup>129</sup> the new windows in this project illustrate a much more appropriate strategy. Although executed in contemporary materials, aluminum and glass, and in accord with the current technical standards, the new window frames fit quite naturally into a historical façade context thanks to their design that echoes the scheme and colour of the original frames.<sup>130</sup>

While the ground floor has been

#### Fig. 37. Dominion Block

**Top** – Building after the adaptation (Photo 1998) Cornice has only been repaired **Below** – New windows detail Although a significant step forward in relation to most earlier projects, by quite successfully emulating the originals, the Dominion Block new aluminium windows solution nevertheless seem to have fallen short of the completely appropriate relation which in this accompany to have here the

solution which in this case appears to have been the full restoration of the original windows from the moment of building's conception, as seen in the 1873 drawing.

However, the subsequent *Project AppLoft*— $2^{st}$  *phase*, involving former *Le Devoir* building, managed to go a step further and treat the same problem in an even more sensitive manner

<sup>129</sup> This is in great part because in the initial stages of the adaptive use practice, custom-made windows were not available on the market. Affordability and easy maintenance were the main criteria for the choice of the new window types, although the tendency to intentionally sharply contrast old architecture with contemporary elements was also present. It is adaptive-use practice that over the last two decades actually created market for custom made windows. Today it is easer for more preservationist-conscious designers to realize windows specially designed for the particular buildings (Interview with Professor Adrian Sheppard, Nov. 15, 1999).

 $^{130}$  The original idea was to replace the existing commercial windows with the light green wooden replicas of the original 1867 windows and to restore the window railings using as a model a sole surviving example (Girard, 1997)—the only entirely appropriate approach. Such a strategy has however been employed in the subsequent 1999 *Project Condos AppLoft – Second Phase* (see the case study - pp. 149-50), involving former *Merchant's Exchange* building (also for a long period housing *Le Devoir*).

reserved for the office and commercial spaces, the upper 5 floors are converted into condominium housing units. Three main floors (first, second and third) have 3.7 m high ceilings and their interior organization is based either on the integral space without interior divisions or in accord the with the so-called "mi-appartement mi-loft" concept, envisioning units with 1.2-1.8 m high divisions and 0.7 m high podiums demarcating different functional areas (Girard, 1997). Basically, this scheme marries the original loft aesthetic and spatial characteristics with conventional housing requirements. From the original loft concept it borrows spaciousness, high ceilings and large fenestration surfaces, while space division is inspired by the layout of conventional apartments.<sup>131</sup> It is a version of this type of adaptive-use residential units that is presently most frequently produced, best illustrating the current stage of evolution in residential adaptive use.

The top two floors are contained within the mansard volume. Ceiling heights are much more conventional—they vary between 2.4 and 2.5 m. The residential units are also envisioned quite differently. The apartments are much larger and extend along the entire building length. Oppening to the street façade is provided through 12 small windows fitted in the historic cornice, while rear units are abundantly illuminated through a series of large windows. The sixth floor, an inward oriented and distinctively modernly executed penthouse with the large fenestrated surfaces and rooftop terrace, is not visible form the street (Girard, 1997).

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<sup>&</sup>lt;sup>131</sup> "Trois de six étages du Dominion Block seront aménagés selon un concept original mi-appartement mi –loft. Du loft, les unités auront les plafonds élevés (12 pieds), les fenêtres énormes et le volume ouvert. De l'appartement, elles auront les divisions, mais les divisions beaucoup plus basses que le plafond. Ces petits murs, de 4 ou 6 pieds de hauteur, et souvent de forme arrondie, séparent le salon et la salle à manger des autres pièces juchées sur un podium de 2 pieds de hauteur.

L'idée du podium est d'ailleurs très pratique en ce qu'elle donne accès à la lumière naturelle jusqu'au milieu du bâtiment, les logements n'étant éclairés que d'un côté. Le contraste entre l'éclairage très vif du salon et de la salle à manger, et celui plus sombre de pièces intérieures peut toutefois être corrigé par un éclairage indirect près du plafond, note M. D'Abbadied'Arrast. Pour qui souhaite des pièces fermées, plus intimes et mieux insonorisées, le promoteur propose de terminer le haut des murs en verre" (Girard, 1997).





Fig. 38. The Canadian Bag Building Top – St-Patrick Street façade (Photo 1982; Architecture Industrielle, p. 94) Middle – St-Patrick Street facade (Photo 1998) Bottom – Lachine Canal façade (Photo 1998)

#### 2.1.7. Canadian Bag<sup>132</sup>

Built in 1913-14, the Canadian Bag building is a typical example of the Lachine canal's early 20<sup>th</sup>-century industrial architecture. The structure's most interesting architectural features are its turrets and robust structural red-brick pilasters, interrupting the large horizontal fenestrated strips. Decorative stone details, typical of this architectural type, are placed at the top of each pilaster.

The introduction of a glass covered interior court was a most significant intervention. Regarding the exterior, a comparison of photos taken before and after the adaptation reveals that the original structure was only partially preserved. While there are no significant additions or changes, the focus being on façade reparation, new windows with new metal rails, replacing the original windows with small-scale subdivided sashes, significantly altered the original facade character without adequately relating to either the original or a new functional character of the building.

If compared with neighbouring luxurious housing projects *Le Cours le Charlevoix* and *Le Loft Corticelli* (see the following case studies), this was a low budget undertaking (Duret, p. 103), which limited the more significant interventions. Positive aspects are a successful consolidation of the decaying structure and proper preservation of the original shell.

<sup>&</sup>lt;sup>132</sup> The former Overseas Chemical Co. Ltd. building was constructed between 1913 and 1914. The building is located at 2491, St-Patrick Street facing *Le Cours Charlevoix* project across the Lachine Canal. The adaptive-use project was completed in 1986 and architectural office *Boutros et Pratte* was responsible for the design. As a non-profit housing project, it created 50 cooperative units for retired staff of La Caisse d'economie de la Norton (Duret, p. 103).



#### Fig. 39. Le Cours Charlevoix

**Top** – Map of the complex (*Architecture Industrielle*, p. 185); encircled patterned shape on the right marks the location of the newly built volume

**Below** – Lachine Canal facing building: before the adaptation (upper) (Photo 1981; *Architecture Industrielle*, p. 186) and after the adaptation (below) (Photo 1998)

## 2.1.8. Le Cours Charlevoix<sup>133</sup>

This 1910-1919 industrial complex consists of the two main building volumes—one facing the Lachine Canal, the other stretching along the Charlevoix Street (Fig. 39). Originally, it also contained several sheds flanking the two main volumes from the courtyard side. During the adaptive-use intervention, they were mainly demolished, while some of their remaining structure was reused for the new glass-roofed pergola running along the Lachine Canal facing volume (Figs. 39, 40) (Duret, p, 101).





<sup>&</sup>lt;sup>133</sup> Originally built for the Still Company of Canada Limited, the complex is also known as Stelco Nuts and Bolts factory. Charlevoix Street volume, a typical wooden frame turn of the century industrial building, was built in 1910, while a functionalist Lachine Canal building with reinforced concrete frame was completed in 1919 (*Architecture Industrielle*, p. 187). The adaptive-use project, the design of the architectural office *Boutros et Pratte*, was completed in 1989. It created 67 luxury condominiums ranging from 110 to 170 sq. m. and 100 underground parking spaces underneath the courtyard (Duret, p. 101).





#### Fig. 40. Le Cours Charlevoix

**Top two** – Charlevoix Street volume: before the adaptation (left) (Photo 1981; *Architecture Industrielle*, p. 184) and after the adaptation (right) (Photo 1998) **Below** – Façade detail with new passage entrance (left) (Photo 1998); detail of the structure visible inside the Charlevoix Street volume passage corridor (middle) (Photo 1998); interior view of the unit in the Lachine Canal facing building (columns with mushroom capitals are left visible, either as freestanding elements or as part of the new division walls) (right) (Photo by Desaulnier, François; Oullet, 1990)



Built within a nine-year interval, the two main original volumes, although sharing the similar floor-to-ceiling heights—four meters high or higher—are different both architecturally and structurally. The Canal-facing volume (1919) is similar to the Canadian Bag building across the canal (see case study - p. 89) and has a reinforced-concrete structure, while the Charlevoix Street volume (1910) is similar to the neighbouring Sherwill-Williams complex in Point-St-Charles (see case study - p. 100) and has a heavy brick-masonry shell with a wooden structural frame.

The façade of the Canal-facing volume consists of continuous glazed and brick spandrel strips with concrete lintels, interrupted by brick pilasters with wedge-shape limestone details on the crown. (*Architecture Industrielle*, pp. 184-87) The addition of the new fourth floor with mezzanines was the most

significant intervention. Puzzling even to the trained eye, the impression is that the new floor is an original part of the building (Fig 41, top and middle left).<sup>134</sup> The original façade was also altered—the originally narrow fenestration strips were heightened by partially demolishing the spandrels (Fig. 39 bellow). Partition walls were built along the column lines turning the freestanding columns into interior pilasters (Fig. 40, bellow right).

The architecture of the Charlevoix Street volume is defined by arched window openings, brick façade pilasters and elaborated brickwork cornices (Fig. 40). Despite the few changes, the facade has maintained its original character, demonstrating a relatively careful preservationist approach. Besides the window replacement, some of the original window apertures were left unglazed, creating recessed balconies and a new central building entrance that also serves as a passage to the courtyard (Fig. 40, bellow left). The new window frames are in keeping with the original ones; however the originally multipaned sashes have been replaced with single-pane ones. In the interior, the wooden structure was left exposed (Fig. 40, bellow middle).

The newly built four-storey volume, placed east of the existing composition, enclosed the formerly semi-open courtyard (Fig. 41, top and middle right).<sup>135</sup> Because the same materials, details, and construction techniques were used, its design went further than merely reinterpreting the original architectural motives. The building copies the architectural style of the original Canal volume. The difference between the old and the new is practically imperceptible—the absence of the patina being the only indicator of its real age.

The overall strategy adopted for *Le Cours Charlevoix* is inconsistent. The design approach for the courtyard pergola, bringing a contemporary time layer into the complex through the use of unequivocally present-day aesthetic, materials and technology, differs from the other new additions. Its contrasting statement, independently of the quality of its design, amplifying awareness of the age of the existing architecture, is a positive aspect. The new volume's strategy has the exact opposite effect. Historical continuity was clouded while the new work lost its integrity and artistic value.

Nevertheless, when properly employed, a similar analogy based method can be an excellent solution. A good example, offered in the following case study, is the *Le Loft Corticelli* project undertaken at approximately the same time on the other side of the Canal.

<sup>&</sup>lt;sup>134</sup> "In the last decade, interest has increased in the use of historic precedent and the introduction of revival styles. Such imitative work is usually not appropriate for an addition or alteration to a significant heritage building, because it can confuse and undermine the integrity of the original. It is more appropriate to provide well-detailed, high quality design which derives from, but does not imitate the original.

<sup>[...]</sup> New work that seeks to imitate or extend original or significant design characteristics of and existing building may, without a careful distinction between original and new material, present a false image of the building's history to viewers. This distinction should not be drawn in ways that would diminish the overall architectural character of the ensemble. "Distinguishability on close inspection" is a useful guideline in assessing the suitability of new work" (*FHBRO Code of Practice*, excerpt from the intervention guideline 3.4, p. 32).

<sup>&</sup>lt;sup>135</sup> The two-storey industrial building on the north, still in original use, represents the fourth side of the courtyard.



#### Fig. 41. Le Cours Charlevoix: new additions

Top - View to the complex from the west. Newly constructed volume (see the Fig. 39 map) is on the right (Photo 1998) Middle left - Façade details of the canal facing original volume (compare the new top floor with existing lower floors) Middle right - The new building façade detail (compare its architecture and details, such as pilasters and limestone details on the cornice, with the almost identical features of the original canal facing volume on the left

Bottom - Details of the glass topped courtyard pergola: West entrance (left) and canal volume courtyard façade (right)



Fig. 42. Le Loft Corticelli: southwest views Top – Main L-shaped original 1884 volume (Photo 1998) Middle – Original building before the adaptive-use intervention southern wing of the main L-shaped volume (Photo 1980; Architecture Industrielle, p. 80) Bottom – Photo 1998

#### 2.1.9. Le Loft Corticelli

The Belding-Corticelli Company built its silk factory on Lachine Canal's south 1884.136 bank in Masonry pillar foundations support the cast-iron structural frame and red brick masonry Among the most interesting shell. architectural features are emergency stairs turrets and an elaborate façade brickwork. The hydraulic power for machines was made available by branching the canal under the factory. Today it provides an attractive water element to the new complex (Architecture residential Industrielle, p. 81).

Despite a few significant additions, the general design and preservationist approach adopted for this adaptive-use project can be described as original and imaginative, while in the same time respectful towards the original Minimal facade architecture. interventions, such as façade cleaning and replacement of old windows as well as, despite their size, unobtrusive rooftop additions, do not endanger the integrity of the original architecture (Fig. 42),<sup>137</sup> while a new two-storey canal-facing building bottom) is harmoniously (Fig. 43 integrated within the historical site.

<sup>&</sup>lt;sup>136</sup> The Belding Corticelli Limited silk factory complex was actually finished in 1893 with the construction of the fourstorey volume on the canal side (Fig. 42; top two). Smaller alterations continued until 1946 (*Architecture Industrielle*, p. 83).

 $<sup>^{137}</sup>$  The adaptive-use project design envisioning 79 luxurious loft-style condominiums was done by the architectural firm *Saia et Cayouette*. The project was completed in 1989. Besides residential units there are some office spaces, as well as underground and outdoor parking (Duret, p. 106).



Fig. 43. Le Loft Corticelli project: northwest views Top left – Perspective drawing of the complex—canal view (Architecture Industrielle, p. 81) Top right – Canal side volume added in 1893 has also been adapted for housing (Architecture Industrielle, p. 81) (Photo 1998) Bottom – Newly built Lachine Canal facing volume (front plan on the left) (Photo 1998)

fenestration The entire was the existing twenty-light replaced: window sashes have been substituted with the new eight-lights model (six lights for the new canal side building (Figs. 42 and 43). Thanks to their aesthetic which is reminiscent of the original onepractically only the scale and the material were changed-the original character of the façade was mainly preserved. It is also well suited for housing, managing to between its new bridge the gap residential and its former industrial character.

The new two-storey brick volume successfully blends with the original architecture. This is an excellent example of a respectful and sensitive, yet original, insertion of the new architecture into the historic context. Although

inspired by the aesthetic of the existing buildings—existing materials, architectural elements and proportions are reinterpreted in contemporary style—it manages to achieve a particular and confidant contemporary expression.

In delicate rather than demonstrative manner, through a series of contemporarily processed original details, the new architecture is clearly distinguished from the original. Before applying them to the new volume, the proportions of the original buildings were simplified to the maximum; the verticality of form, typical of this architectural type, was eliminated. The result was a shorter and wider new building form—almost a cube. The new window design was conceived in a similar manner—tall and narrow frames (2 x 8 or 2 x 6 lights), reserved for old buildings, are paralleled by squarely proportioned frames (3 x 3 lights) applied in the new volume.

Its brick façade was also simplified to the maximum; the elaborated brickwork characteristic of the original façades is absent in this case. Its masonry base echoes the original detail—the smooth surface of its white artificial stone replacing the rough texture of the natural stone of the base strip on the original buildings.



2.1.10. Solin Hall <sup>138</sup>

This early 20<sup>th</sup> century former industrial complex, although without turrets and facade details decorative typical of other similar buildings in the Lachine Canal area, is an important example Montreal's of industrial heritage and therefore rightly identified by the city as a heritage building (Kolelait-Barrage).

Southern façade of the main volume after the adaptation (smaller structures of this former industrial complex are partially visible on the left) (Photo 1998)

Originally, the main building—an irregularly shaped, red-brick volume with pilasters interrupting large horizontal fenestrated stripes—was only three stories high. As part of the 1989 adaptive-use intervention, a new fourth floor was added to the main volume in the pattern of the lower original stories (Fig. 44). The original smokestack was demolished. The old coping, formerly on top of the third floor and presently marking the line between old and new, is the only indication that a rooftop addition might have been built subsequently. The architecture of the new floor neither added a contemporary time layer nor revealed the period in which it was built, thus creating confusion about its actual age. The nature of the new ground-floor metal canopy structure, executed in a distinctively contemporary design and choice of material, contrasts with the existing structure.

This adaptive-use project also entailed complete rebuilding of the interior, sparing only the structure. The façade was repaired and cleaned. Interventions on smaller brick structures south of the main volume (its northeast corner is visible at the Fig. 44 left margin) included minor interventions on window openings, mainly to enlarge them.

Perhaps the project's most important accomplishment was that residents of the surrounding Saint Henry working-class neighborhood were employed as maintenance staff, deflecting the criticism and resistance from the local population that usually accompanied similar residential adaptations in the Lachine Canal area (Kolelait-Barrage).

<sup>&</sup>lt;sup>138</sup> This industrial complex was started in 1906 and completed through seven stages by 1946. The first user was General Foods. Later, it served a variety of industrial uses, the last being a plastic clothing factory (Kolelait-Barrage). It is located at the corner of Lionel-Groux and Rose de Lima Streets. It was acquired by McGill University in 1989 and adapted for student housing. The adaptive-use project created 100 three-bedroom student-housing units and 38 underground parking spaces. Design was the responsibility of the architectural firm *Desnoyers, Mercure*. The project was completed in 1990 (Duret, p. 99). It received the 1990 Orange Prize for quality (Girard, 1995).



facade view and east entrance detail Interior view; original

(Photo by Beck, Gordon, 1989) (Bronson, 1989) Bottom - Typical unit layout (Le Voir,

Jan 24, 1990)

# 2.1.11. Le Coloniale<sup>139</sup>

This typical turn-of-the-century industrial building is situated in a Plateau residential neighbourhood. Overall, this is a sensible and thoughtful adaptive-use project. It preserved the original structure to a significant degree, while meeting functional requirements and market demands. The heavy brick masonry shell with its arched window openings, masonry setbacks and brick patterns was left almost intact. It was mainly repaired and cleaned, and the new windows resemble the originals. Floors and new interior division walls are acoustically insulated, which is always a major issue in the conversion of industrial buildings (Duret, p.147).

Some office space was created on the ground floor, while the remainder of the adapted building contains spacious somewhere between lofts, fitting luxurious and affordable categories. Each loft is an open space, the only partition being placed around the bathroom (Duret, p. 147).

The early condo buyers were allowed to keep the original non-

functioning pipes, thus preserving a small trace of the former spirit. Much of the original industrial atmosphere was erased when the old heating system in the rest of the units was replaced by contemporary conventional electric baseboards. A more conventional housing atmosphere was introduced when carpets were installed as a final floor finish (Bronson, 1989).

<sup>&</sup>lt;sup>139</sup> Formerly serving multiple purposes, such as manufacturing and warehousing, the original building, located on Colonial Ave. just below St. Joseph Boulevard, was adapted for housing in 1989-90, creating 46 residential units. The architectural design was the responsibility of architectural firm Atelier Poirer Depatie (Duret, p. 147).



#### 2.1.12. Les Cours Le Coubertin

then 40 structures From more originally comprising this industrial complex. the only structures remaining are a 120m long and 18m wide main volume, with its cruciform pavilion at the rear (1911-1912), the chimney (1946) and two one-storey ateliers to the southwest (1940) (Architecture Industrielle, p. 242).<sup>140</sup> The main building's<sup>141</sup> shell is brick masonry with pilasters interrupting large fenestrated strips. A brick corbelled cornice and stone details, such as the existing entrance frame and a continuous sill between the third and fourth floors, are the only decorative elements.

The recycling project created 70 condominium residential units ten of them in loft-style (open-plan concept)—and some office space (Duret, p. 174). The building has not been significantly altered; most of the original interior and exterior features have been preserved. The east-side

#### Fig. 46. Les Cours le Coubertin

**Top** – Aerial view of the original complex (Photo 1946) (Pinard, 1987, vol. 5, p. 33) **Middle** – View to the main volume before adaptation (southeast corner) (photo 1981)(*Architecture Industrielle*, p. 242) **Bottom** – View to the main volume after adaptation (northeast corner) (Photo 1998)

<sup>&</sup>lt;sup>140</sup> Architect Howard Stone was the original designer of this former shoe factory (United Shoe Machinery Ltd) built in various phases from 1911. The building was bought in June 1988, adaptation work began two months latter, and the project was completed in June 1989. The design was done by the architectural office *Boutros & Pratte* (Duret, 174).

<sup>&</sup>lt;sup>141</sup> Its structure consists of concrete foundations supporting steel columns and beams carrying so-called "mill floors" layers of wood laid at different angles to retard the spread of flames (*Architecture Industrielle*, p. 242).


street entrance was relocated from the seventh to the eight building bay, and a new entrance was created in the sixteenth bay. The new window design, although retaining little of the original look, successfully addresses the former industrial and the new residential functional character. Public recognition of the project's quality was expressed by the award of a prestigious Prix Orange de Sauvons-Montreal (Pinard, 1990).

#### Fig. 47. Les Cours le Coubertin

Top – The contemporary designed metal and glass entrance portico echoes the original building's nature through its industrial esthetic. On top, recessed behind voided window openings, the newly inserted glass panel illuminates the interior staircase (Photo 1998)

**Middle** - Façade detail before (left) (Pinard, 1987, vol. 5, p. 34) and after adaptation (right) (Photos 1998)

**Bottom** – Northwest view to the complex after the adaptation (Photo 1998)













#### 2.1.13 Sherwin-Williams Complex

Out of ten buildings once comprising the Sherwin-Williams industrial complex (paint factory) only three were spared demolition after its abandonment in 1985. In 1998, they were transformed into three housing projects, ranging from the luxurious units in *Lofts Sherwin-William* and *Écolofts Argenson* projects to the low-cost and moderately priced rental units in the *Habitations Sherwill* project.

#### 2.1.13.1. Lofts Sherwin-William

The office building, built in 1903—a typical turn of the 20<sup>th</sup>-century Victorian-style red brick structure, with pine structural frame and 4.3m high interiors, was the first building to be recycled (Fig. 48).<sup>142</sup> Its original architecture, as well as adaptive-use solutions, are similar to the Cours le Charlevoix project (see case study pp. 90-3). Interventions on the facade were minimal and, in general, the building kept much of its

#### Fig. 48. Lofts Sherwin-William

Top two - Photo 1980 (upper) (Architecture industrielle, p.178) (the structure was in a precarious state-note the missing top floor corner) and Photo 1997 (below) (after completion) <http://www.chez.com/montreal/Industriels/Industrie l/Industries12.html> Below - The partially demolished lateral façade was restored using similar bricks (Photo 1998) Bottom left - Main entrance from Centre Street. (Photo 1980; Architecture industrielle p. 181) Bottom right - Main entrance wooden door and stonework were also partially restored and repaired; windows are replicas of the original ones (Photo

1998)

<sup>&</sup>lt;sup>142</sup> In 1997, the old office building originally designed by architectural firm McVicar et Heriot and built in 1903 (*Architecture Industrielle*, p. 178), was transformed into 49 loft-style condominiums (project *Lofts Sherwin-William*), ranging in size from (58-116 sq. m.) Adaptive-use project architect was Michel Léterneau (Whittaker 1998).

#### 2.1. Industrial Buildings



original appearance. Prior to the conversion, the building was in rather bad condition. Reparation/restoration work had to be done on the damaged lateral façade and cornice. Floors had also to be repaired.<sup>143</sup> Missing bricks from the lateral façade and from the cornice were replaced with new ones of a similar coulour.144 While some additional restoration work was done on certain original features, such as the main entrance portal stonework and its wooden door, most of the work was limited to repairing and cleaning. The exception was the replacement of all existing windows with green aluminium replicas.

# Fig. 49. Projects Habitations Sherwill and Écolofts Argenson

**Top** –View to the Sherwin-Williams complex before the series of adaptive-use interventions: the two-storey structure on the left is the former laboratory (future *Écolofts Argenson* project); the office building (future *Sherwin-Williams* project) is in the middle (second plan) and the warehouse (future *Habitations Sherwill*) is on the right (foreground) (Photo 1997 by Pierre Côté, Marsolais 1997) **Middle** – Completed *Écolofts Argenson* project (former laboratory) (Photo 1999)

**Bottom** – Partial view to the complex after completion of the adaptive-use projects. Project *Habitations Sherwill* is in the foreground (Photo 1999)

<sup>143</sup> "Une partie de mur s'était écroulée, il y avait des briques fissurées et les planchers étaient loin d'être droits"says the project's developer, describing the heavily damaged structure prior to the adaptive use intervention (Hébert, 1998c).

<sup>144</sup> Alternative methods of introducing a clearly contemporary new architectural element or at least, if replicating the missing features by employing similar material, doing it in a way so that the new intervention is in some way distinctive from the original architecture—what would be in accord with the predominant current theoretical recommendations—were not adopted in this project. Instead, the missing bricks, due to the impossibility of finding the original material, were replaced with the their closest match—admittedly counting on the fact that they would soon weather and gradually completely merge with the original façade: "Sur le côté où elle s'était en partie écroulée, il fallu la remplacer, et il a été difficile de retrouver le material d'origine. M. Blouin [developer] a dû se résoudre à installer des briques d'une couleur légèrement différente à celle des murs du début du siècle. « La différence va s'atténuer avec le temps, prevoit-il. Elle est déjà bien moins apparente qu'au début. »" (Brouillet, 1998).

Avoiding any kind of judgement, it may be said that while in direct conflict with the Venice Charter Article 12 (see footnote 78), the adopted restoration strategy fits into the context of the Brandi approach (see p. 43) according to which architecture is considered from the art conservation perspective—buildings are not treated much differently from damaged paintings in need of restoration.

#### 2.1. Industrial Buildings

#### 2.1.13.2. Écolofts Argenson

A plain brick structure formerly containing laboratories (Fig. 49, top and middle), adjacent to the *Lofts Sherwin-William* project, was also transformed into condominium housing units.<sup>145</sup> This project used what was salvageable of the existing building. The original structure and shell was in excellent shape,<sup>146</sup> and the main intervention was the addition of a new third storey which, due to its contemporary expression, architecturally contrasts with the original building—the rounded roof form and the three-bay sculpting of the facade modulate the flat surface of the original façade, and together with the contrast of new stucco against old brick make it clearly evident that the building was built in two distinct pieces at two different times. The original shell was rhythmically punctured with new windows and balconies. The high floor-toceiling heights gave the building great flexibility in space planning, allowing the introduction of bedroom mezzanines. Depending on the unit size, one or two conventionally enclosed rooms were created in some cases.

#### 2.1.13.3. Habitations Sherwill

This pragmatically oriented adaptive-use project, even more pragmatic than *Écolofts Argenson*, entailed complete stripping of the five-storey brick building, saving only its concrete structure (Fig. 49, top).<sup>147</sup> The architectural aim of the new shell (Fig. 49, bottom), which included a new top-floor addition, seems entirely different from other projects involving industrial relics in the area—including the adjacent *Lofts Sherwin-William*. Here, the adaptive-use strategy attempts neither to restore the original state nor to produce a contemporary creation that would flamboyantly stand out. Instead, it achieved a typical residential look with hardly any notable design intention of addressing building's former industrial nature, making it hard to assess this project in any preservationist context.

Despite the series of puzzling design solutions, one of them being for example the inconsistent brick application to the first two floors only, this project is particularly relevant for being a clear recent example of the pragmatic attitude that opts for reusing existing assets instead of demolishing them. However, the adopted solutions in this case do not seem entirely satisfactory. There are not enough obvious arguments for investing in costly partial demolition in order to save only a structural frame—considering the design constraints it imposes—against the evidently logical choice of erecting an entirely new building in its place.

<sup>&</sup>lt;sup>145</sup> In 1999, the1957 flat-roof two-storey building, with dark brown brick façade and walls up to 0.6m thick to withstand explosions, was transformed into 42 residential units ranging from 88 to 140 sq. m. and with 3.7m floor-to-ceiling heights. The architect responsible for the project was Michel Léterneau (Hébert 1998, Whitaker 1998).

<sup>&</sup>lt;sup>146</sup> According to the developer: "La structure est quasiment impeccable. Notre seul souci est de donner à cette architecture plate une nouvelle allure, une nouvelle personnalité" (Hébert, 1998c).

<sup>&</sup>lt;sup>147</sup> A sixth floor was added to this concrete building to achieve the 75 new rental apartments promised by city to the local community. This is one of the first buildings of this type in Montreal. The lower floor units are 5 1/2s and 6 1/2s, with ten units designed specifically for handicapped persons. The other apartments are 3 1/2s (Marsolais 1997, Hébert 1998).

#### 2.1. Industrial Buildings



Fig. 50. L'Usine Mont-Royal Top – Façade after the adaptation (Photo 1998) Bottom left – Original windows reused in the new bathrooms' arrangement. (Photo Lemée, R.; Hébert, 1997) Bottom right – New windows detail (Photo1998)

#### 2.1.14. L'Usine Mont-Royal<sup>148</sup>

This 1927 red-brick industrial building is one of many similar examples distributed all over central Montreal neighbourhoods. They have no exceptional heritage value, their main value lying in their usually superbly sound structures and in their role as important segments of local identities.

This adaptive-use project basically kept and preserved the original masonry shell and reinforced concrete structure. The façade was cleaned and repaired, while modern windows with galvanised aluminium frames replaced the original multiply-subdivided metal frames with frosted glass panes. However, a few original windows were kept in use: still in their original frames and complete with functional hardware, they have been installed in the interior as part of the bathrooms walls (King, 1998). This is an interesting solution; besides preserving the original architectural feature, in a way it deconstructs the original relationship between the building's façade and its interior. In a practical sense it provides at the same time a deeper natural light penetration (Fig. 47).

Some of the original interior features such as concrete walls and columns, as well as part of the original piping, were also left visible, perpetuating part of the original

interior atmosphere (Hérbert, 1997b). Concrete ceilings were left at their original 3.2 m height, and the support beams were left intact (King, 1998). In general, the project succeeded in preserving the original

<sup>&</sup>lt;sup>148</sup> The address of this former textile factory is 205 Mont-Royal Ave. This adaptive-use project was completed in 1998. Architects; interior designers and decorators were from the Plouk Design firm. The final result is 35 apartments ranging in size from 75-150 sq. m (Hébert, 1997a).







#### Fig. 51. L'Usine Mont-Royal

**Top** – View to the bare interior prior to the adaptation (Photos Lemée, R.; Hébert, 1997a) **Middle** – Model apartment: main living room space (Photo Lemée, R.; Hébert, 1997a) **Bottom** – Model apartment: typical kitchen arrangement (Photo Lemée; R., Hébert, 1997a) structure and brings it back to use in an appropriate manner.

Instead of the common straight central corridor concept, the zigzag forms of the new corridors define the new floors' disposition, creating unusual angles and interior perspectives. The intention was to recreate the idea of the neighbouring, irregularly sprawled Gilford Street (Hébert, 1997).

Unit design was based on the open-plan layout, the only division being around the bathroom.<sup>149</sup> The simple design of the new interior features was intended to correspond to the simplified lifestyle of contemporary dwellers—mostly singles and childless couples (Hébert, 1997).

Regarding technical aspects, the acoustic characteristics of the original concrete structure had to be improved in order to satisfy the much more exigent residential standards than was the case with the original industrial use. This entailed significant insulation work.

<sup>&</sup>lt;sup>149</sup> The designers tried to avoid the implication of loft terminology considering it too "in" for the consumer market which at the time was more oriented towards more conventionally-organised units: "Au départ, on ne voulait pas que le promoteur utilise le mot loft pour ces appartements, confie Christian Bélanger, de Plouk Design, et ce, même s'ils possèdent la plupart des caractéristiques. Pour certains clients, cette expression est trop « in » ou trop flyée. L'Usine Mont-Royal, ce sont plutôt des appartements conçus et aménages selon les normes qui prévalent pour les appartements en copropriété. Après tout, s'ils le veulent, les acheteurs pourront diviser en pièces fermées leur chez-soi" (Hébert, 1997b).



Fig. 52. Les Cours d'Outremont Top – Main façade (Photo 1999) Middle left – Front façade detail (Photo 1999) Middle right – Two interior views (Richer, 1998) (Photos McVann, Pierre; Richer, 1998) Bottom – Interior views: during construction (left) and new kitchen (right) (Photos by McCann, Pierre; Richer, 1998)

#### 2.1.15. Les Cours d'Outremont<sup>150</sup>

This is a typical recent example of a adaptiveuse which does not aspire to architectural originality. It is in accord with current adaptive-use methodology applicable to buildings without exceptional heritage value, where relatively significant alterations to the building shell are a compromise between the functional and pragmatic aspects of the new use and a basic preservationist requirement for buildings to maintain some of their former look and character.

The facade was only partially After the original window preserved. openings were significantly enlarged, new, squarely proportioned, thin black aluminiumframe windows were installed. Other exterior changes included rooftop additions done in the same manner as the original building and using the same red-brick exterior finish (Richer, 1998). They are significantly recessed and visible only from a distance, thus not affecting drastically the original volume proportions. The new residential use is implied through new corner apartments loggias and French windows with black metal balconies.

Except for the old staircase which was repaired and preserved, the interior was stripped to the bare structure and completely redone—old pipes, installations and walls were eliminated. There are three different types of residential units: two-storey maisonettes with independent entrances from the street level, loft-units with loggias and balconies on the next three stories and roof-top penthouse units with enclosed rooms and private and semi-private terraces (Richer, 1998).

<sup>&</sup>lt;sup>150</sup> The red-brick industrial building (former print shop and office building) at 970 McEacharan Street, Outremont, was built in the late 1920s. In 1998 it was converted into 45 luxurious housing units and an underground garage with 36 parking places. Design and construction were done by Rosdev company (Richer, 1998).

#### 2.2.1. Introduction

#### 2.2.1.1. Religious Buildings<sup>151</sup>

One of the consequences of the last several decades of secularization was the obsolescence of hundreds of Montreal's churches, monasteries, convents, schools and other religious and institutional buildings. Currently, the lack of appropriate maintenance is starting to seriously endanger these increasingly decaying buildings.<sup>152</sup> Crumbling structures are becoming a burden for the religious communities which own a majority of them and it is common for properties to be sold to developers who launch lucrative adaptive-use projects. Although Montreal's religious heritage has yet not received proper attention, the problems connected with it are fairly well known and slowly becoming a general public concern.<sup>153</sup>

The largest number of residential adaptive-use projects have involved convents and monasteries. However, there are cases of churches that have been converted into housing as well—the adaptation of the former First Presbyterian Church being a very illustrative example.

Convents are complex and multifunctional buildings. Besides offering collective housing for the female religious orders, they sheltered hospitals, schools, orphanages, hospices and workshops of various sorts. Before the secularisation of the 1960s, when the state took over responsibility for healthcare, education and welfare, these religious communities of women played a significant role in these areas. Changes in organisation and the dwindling members in the religious orders after Vatican II, were also the reason for the vacation of many convents (Martin, p. 1).

A number of Montreal convents have been converted into different types of housing, schools or government offices (Martin, p. 2). The adaptation of Le Mont Saint-Louis convent represents the first public investment in luxurious housing (Duret, p. 137). The former Couvent des Petites Filles de Saint-Joseph also accommodates luxurious condominiums, while Le Complexe Conventuel du Très-Saint-Sacrement—once a monastic installation—is an example of adaptation for low-cost housing (Duret, p. 137). Finally, the Monastère du Bon Pasteur was converted into a mixed-use complex—cultural centre, office space, housing cooperative, residence for the elderly, day-care centre and condominiums (Martin, p.2).

<sup>&</sup>lt;sup>151</sup> "In Quebec, we didn't built palaces or museums or other buildings of a heritage nature. Everything was focused on religious buildings. It's that history that we have to live with" (Excerpt from the interview with Bishop Willard) (Beaudin, 1996).

<sup>&</sup>lt;sup>152</sup> There is a risk that in a relatively short time many of them will reach the critical point of decay and require urgent attention all at the same time. In view of their large number and high repair and maintenance cost, neither the city nor the religious orders could find it easy to provide the investment required to insure their survival (Beaudin, 1996).

<sup>&</sup>lt;sup>153</sup> Sale of these buildings prompted the debate on whose responsibility and property they really are. The fact that these buildings were built with land and money donated by the members of congregations, and tax breaks offered by governments, strengthens the argument of historians, urban planners, heritage activists and citizens that the public should have its say in the final decision about their destiny. On the other hand, religious communities are outraged by the idea that their buildings could be considered public property, claiming them to be exclusive property of the religious orders (Beaudin, 1996).

#### 2.2.1.2. Schools

Three significant characteristics make school buildings readily adaptable to new uses. The first and possibly most important aspect is the schools location within the city and community. Secondly, the school building-fabric lends itself easily to the integration of contemporary dwelling-units within the given envelope. Thirdly, since they've been designed for public occupancy, school buildings usually conform to the most demanding building and fire code requirements. (Sheppard, 1990b)

In terms of their location within neighborhoods, old schools do not only have a historical or architectural value but also a symbolic value for the residents of the community involved. The conversion of old schools is generally welcomed by their neighbourhoods, because preserving their social value contributes positively to the maintenance of the local identity, whether through the attachment to habits or the permanence of landmarks.<sup>154</sup>

Whereas the transformation of industrial buildings in heavily industrialised Montreal areas that are still the focus of the remaining working-class neighbourhoods is often condemned for its potentially negative socio-economic impact, the same cannot be said of Montreal's schools. The location of schools usually corresponds with demography, not economy, which causes them to be evenly and individually scattered around the cities without forming clusters or zones as in the case of industrial buildings. While some schools, including the examples presented here, are found in old, mainly central, mixed-use Montreal neighbourhoods, the majority is evenly distributed in residential areas around the city.

Generally oriented towards the production of affordable and low cost housing (often non-profit cooperatives), the adaptive-use projects involving obsolete schools allow them to continue blending with their neighbourhoods—the identities of which are strongly linked to these prominent local landmarks. Future residents usually have a chance to participate in the design process, helping to find solutions that best suit both their collective and individual needs.<sup>155</sup>

The most frequent objects of adaptive-use projects are schools built before WWII. They have certain design features, which tend to facilitate their conversion, often absent in post-WWII schools which vary in "size, geometry, construction, [and] spatial patterns" (Sheppard, 1990b). Some of the common old school design characteristics which favour housing adaptation, are their wide central corridors, well-lit and spacious classrooms, between 8 and 10 meters wide, and windows usually spaced about 3.5 m apart. Also, the load-bearing capacities of these structures, built in a traditional manner using traditional materials, are in keeping with public building requirements, which are much higher than necessary for

<sup>&</sup>lt;sup>154</sup> "Where a building establishes a strong role in reinforcing the character of the area or district in which it sits, strong efforts should be made to retain these relationships" (*FHBRO Code* of Practice Intervention Guideline 8.3: 'Role In Defining District Character', p. 47).

<sup>&</sup>lt;sup>155</sup> In the case of co-operative housing, the future residents "were blessed with determination and good will, started out as virtual neophytes in matters of architecture and financing, and by the odyssey's end they became contributing and participating partners in the design team" (Sheppard, 1990b).

residential purposes.<sup>156</sup> This permits the possibility of introducing mezzanines within the units (or entire new floors, if gymnasiums are being adapted). It also allows the alteration of existing floors to satisfy the new housing requirements—new slabs in accord with thermic and acoustic standards, are often added on top of the existing floor structures.

The expanded notion of flexibility is evident again. The layout of classroom floors in old school buildings, basically a series of classrooms placed along the double-loaded corridors—the existing classrooms sizes approximately corresponding to the typical one- or two-bedroom residential units—often happens to be the best solution for distribution of the new units and is often employed. Though rare, due to the often poor conditions of the interiors, there are examples where original classroom divisions are kept.

Regarding exterior interventions, in addition to the routine façade cleaning and reparation—often including fenestration replacement—an issue particular to old-schools adaptations is the treatment of their existing entrances. Often carefully executed staircases leading to elevated entrances are features found in most old schools. Depending on the project, they are treated differently; sometimes, as will be illustrated in the following case studies, they are kept in use and adequately preserved, but in many cases they are demolished, taking away this significant character-defining element.

Schools have proved to be the most appropriate building type for residential conversion and for this reason adaptive use may deserve the greatest credit for the preservation and overall survival of this building type in Montreal. While certain categories of religious and industrial buildings are marked as inappropriate or at least problematic for housing,<sup>157</sup> school conversions—besides being more than welcome by residents in their immediate vicinity—are the least difficult to undertake. The common procedure is to gut and strip the interior and to preserve the exterior shell to the greatest possible extent. Most adapted schools belong to the affordable or low-cost housing category and for that reason the design of new units depends mostly on the standards set by the CMHC (Canada Mortgage and Housing Corporation).

It may be said that the old school conversions have, in certain respects, modified the loft-living stereotype, which by definition contradicted the purely residential nature of the suburbs. Residential conversion of old schools, more than any other non-residential building type involved in adaptive use, integrated two essentially opposite concepts: the inherently urban loft lifestyle and the suburban aspect of the purely residential neighbourhoods, where schools are usually located.

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<sup>&</sup>lt;sup>156</sup> A similar situation arose in the examination of old industrial buildings design.

<sup>&</sup>lt;sup>157</sup> Introduction of housing in church buildings often provokes negative reaction from both the religious communities, which disagree with the way their temples are treated; and architectural and preservationist circles, which point out their significant alteration and destruction caused by an intrinsic mismatch between residential and worshiping functions. Similar reaction is heard when factories, especially in existing working-class neighbourhoods, are converted into condominiums.

Projects involving old schools need to integrate to a certain degree into the surrounding residential context. They have to adopt certain qualities from conventional housing, in the sense of both their interior and exterior expression even if it means only an avoidance of explicitly modern or contrasting statements, mainly expected or desired in inner city locations. Also, most often these are exclusively residential projects—the cases of mixed-use are generally not frequent in school conversions.

The fact that adaptive-use projects involving school buildings are most often committed to affordable or low-cost housing can be explained by the fact that their locations are often less attractive to well-to-do loft-living fans who seek more ostentatious heritage buildings, more often found in central neighbourhoods like Old Montreal or the Lachine Canal area. Also, there are more families accommodated in adapted schools than in other adapted buildings normally located closer to the central city areas. Traditional loft enthusiasts—at one time artistic and bohemian types and currently increasingly young professionals—still prefer to inhabit central city zones, even if it means occupying illegally converted buildings, whether for the reason of the dynamism of these areas or simply following the loft stereotype as an exclusively urban housing type and involving exclusively old industrial buildings.





## 2.2.2. Le Complexe Conventuel du Très-Saint-Sacrement<sup>158</sup>

This 1983-85 adaptive-use project included restoration of the building parts destroyed in a 1982 fire,<sup>159</sup> making the preservation of this religious heritage monument an important example of not only an excellent adaptive-use undertaking, but also of an appropriate restoration intervention of a significant degree.

Only part of the complex was adapted for housing. Conversion of Blocks C and D (Fig. 54, bottom), which occupy 30% of the total area of the complex, created 45 low-cost studio-housing units and communal spaces for poor neighborhood residents. The rest of the complex was kept for religious and community purposes (Boileau 1990, p. 262).

Most of the work was done on the building exterior. The damaged mansard roofs with dormers, as well as parts of the damaged east-wing graystone façade (Block D), were

#### Fig. 53. Le Complexe Conventuel du Très-Saint-Sacrement

**Top** – Main façade (Photo 1910) (Pinard 1987, vol. 2, p. 263)

**Below** – Central volume after the adaptation (Photo 1998) Restored original elements (e.g. mansard roof and dormer windows) are indistinguishable from the old parts. New windows are replica of the ones existing before the intervention. Also compare this case of restoration with the addition of the originally non-existing mansard roof in the *Henry-Julien Project* (pp. 146-7)—the same construction method was employed in both cases but with entirely opposite results from both preservationist and new architecture points of view

<sup>158</sup> The former religious complex Maison des pères du Très-Saint-Sacrement, 500-530 Mont-Royal Avenue, was originally designed by the architect Jean-Zéphirin Resther and built between 1892 and 1908 (*Les couvents*, p. 230). It was declared a historic monument in 1979. Blocks C and D (Figs. 53 and 54) as well as the chapel roof, heavily damaged by fire in 1982 (*Les Couvents*, p. 231; Boileau, p. 262), were restored during the 1985 adaptation for a variety of new uses.

<sup>159</sup> "After numerous social, historical, economic and technical studies, the nuns decided in 1983 to renovate and restore the convent" (Boileau, p. 262). The adaptive-use design architects were Paul Goyer, Pierre Collette and Gilles Lavigueur (*Les Couvents*, p. 231).



restored to their original state. Craftsmen employed traditional building methods (Boileau 1990, 262). The general result was a very successful preservation of the existing features and restoration of those that were missing.

From the functional standpoint this is an interesting mixed-use model. The newly-introduced quality low-cost housing complements the existing religious character and benefits from symbiosis with the religious function. Judging by the success of this project, this adaptive-use model seems quite applicable to future adaptations of not only vacant religious buildings but also those still in use—delaying their obsolescence and solving the problem of the decay of the religious heritage.







#### Fig. 54. Le Complexe Conventuel du Très-Saint-Sacrement

**Top two** – North-east views after the intervention (upper); detail of Block C (former print shop) (below) (Photo 1998) **Bottom left** – New ground floor plan. Main volume east wing (Block D) and its subsequent addition (Block C) were converted into housing, while the rest kept its religious function (Blocks E and F contain the religious center and community activities (Boileau, p, 264)

Bottom right - New residential units: Bloch C and part of the Block D



#### Fig. 55. Les Jardins de l'Église

**Top** – Façade before the adaptation (Corner Jeanne – Mance and Prince Arthur streets) (Photo 1974) (*Les églises*, p. 30-31)

**Bottom** – Façade after the adaptation. (Photo 1999) Only the two corner façade walls have been preserved Among other facade changes was the painting in black of the originally colored stone mullions and tracery (Baker, 1986)

#### 2.2.3. Les Jardins de l'Église

Of the many abandoned churches in Montreal, only a few have been transformed into housing. The public character of churches opposes the intrinsically private nature of the housing function, and their original design characteristics do not agree with residential functional requirements. For this reason, they have been converted mainly to theatres, schools, libraries, recording studios even warehouses (Wolfe, 1993).

In reality, from both the architectural and preservationist standpoints, church buildings represent probably the most difficult building type to recycle successfully. Their design, deriving from such a specific function as a religious service, does not lend itself easily to modifications of any kind. In addition to their already quite particular functional requirements, another design requisite that applies to both church shells and their interiors is the creation of a specific psychological effect on visitors and passers-by. This sets them apart even from other religious building types. For all these reasons, the fundamental problem when dealing with the adaptation of obsolete churches is finding a compatible new use, able to make a compromise with the original design characteristics.

Residential use is hardly one of them. Firstly, when housing is introduced into church buildings, this as a rule implies a significant alteration of the original architecture and, despite the best intentions and efforts, the results are

questionable in most cases. Secondly, there is a great deal of difficulty regarding the satisfaction of residential requirements—much more than in the case of conversion of other building types.



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#### Fig. 56. Les Jardins de l'Église

**Top** – Eastern lateral facade after the adaptation. Distribution of the new openings is not in tune with the original facade concept (Photo 1999)

Bottom – New structure added behind the preserved facade walls has little in common with the original

The partition of integral church interiors is a necessary intervention in order to form housing units, invariably destroying the integrity of the interior spaces and completely erasing the original functional component. Also, piercing the practically monolithic facades in order to provide enough natural light for the units is in most cases equally unavoidable. The final result is far from preservation; it is actually a negation of the original architecture and its original role.

Shortcomings caused by a mismatch between housing and church architecture are well illustrated in the controversial project *Les jardins de l'eglise* (the former First Presbyterian Church)<sup>160</sup> (Baker, 1986). Only two street-facade walls were saved making the project a typical example of "facadism." As seen in Fig. 56 (bottom), a large residential structure, containing 24 luxurious condominium apartments, was raised behind the street facade.

Although church conversions are always a challenge per se, in this case, not all the project's shortcomings are the result of the building's intrinsic inappropriateness for residential use. In an architectural sense, it is hard to find any meeting point between the new rear structure and the old church shell. Also, as seen in Figs. 55 (bottom) and 56 (top), new windows and balconies created a

confusing mix with original elements, damaging the original façade and conflicting compositionally with its original scheme. The choice of new elements (particularly the new commercial residential windows) is quite inappropriate, revealing the lack of a serious design effort and respect for the original building.

<sup>&</sup>lt;sup>160</sup> The original building, the former First Presbyterian Church, located at 3666, Rue Jeanne-Mance, was completed in 1910. The original architects were Alexander C. Hutchinson, George W. Wood and J.M. Miller (*Les églises*, p. 30). The adaptive-use project, whose architect was Uwe Peetz, was completed in 1985 by. The former church was transformed into 24 luxurious condominium housing-units (Duret, 128).



#### Fig. 57. Le Monastère du Bon Pasteur

**Top** – Map with information on years in which each building was built (Pinard, 1987, vol. 2, p. 19)

**Bottom** – Axonometric presentation of the completed adaptive-use project (Boileau, p. 284)

#### 2.2.4. Le Monastère du Bon Pasteur<sup>161</sup>

Preservation of the original architectural character of this important religious complex and satisfaction of the new-use requirements were the main objectives of the SIMPA (Société immobilière du patrimoine architectural de Montreal) which was responsible for this adaptiveuse project<sup>162</sup> (Pinard 1987, vol. 2, p. 18). The chapel (middle Sherbrooke Street volume (Fig. 58, top and middle) was transformed into a concert hall, while its bell tower was converted into an airintake and discharge system. The east wing became a housing cooperative with 27 units, while 37 residential units for elderly people were created within the west wing (Boileau, 284; Duret, 135).

As usuall, the greatest attention was given to buildings with the highest heritage value, in this case the Sherbrooke Street volumes, which have been much better preserved than the rest of the complex.

With the exception of the fenestration replacement, the façades of

<sup>&</sup>lt;sup>161</sup> The original complex of the former Monastère du Bon-Pasteur was built by the Soeurs Notre Dame de la Charité du Bon-Pasteur in various phases. The central corpus was completed in 1847 supposedly by John Ostell and continued until the beginning of the 20<sup>th</sup> century (Fig. 1) (Pinard, 1987, vol. 2, p. 20). The architecture of this monastery building is characteristic of French Regime convents, as exemplified in the Ursuline convent in Quebec City (Pinard, 1987, vol. 2, p. 20). It also integrates the British technique for stone masonry—so-called *taille an equerre* (Duret, 133). Its main features are mansard gables, polished graystone facade walls, gable roofs with dormers and regularly distributed simple windows.

<sup>&</sup>lt;sup>162</sup> The adaptive-use project was realised between 1984 and 1987, under the guidance of SIMPA with Vianney Belanger as the chief architect. The total number of new residential condominium units is 64: 44 one-bedroom, 15 two-bedroom, 4 three-bedroom and 1 studio unit. There is also a garage with 26 spaces, a 150 seat concert hall in the former chapel, and offices rented by the Office des services de garde à l'enfance du Quebec. The east wing contains 27 low-rent family units, while 37 units for elderly people with modest incomes are accommodated in the west wing under the name *Résidence Aurélie-Cadotte* (Boileau, 282; Duret, 135).







#### Fig. 58. Le Monastère du Bon Pasteur

**Top** – Sherbrooke Street façade before the adaptation (Photo 1974) (*Les couvents*, p. 274)

**Middle** – Sherbrooke Street façade after the adaptation (Photo 1998)

**Bottom** – Exterior changes of the south and weste side of the complex include: complete window replacement, new cladding of the Saint-Dominique mansard roof (volume on the left), new roof with dormers and new ground floor arched entrances on the buildings along St-Norbert Street (two volumes on the right) (Photo 1999)

the Sherbrooke Street volumes were left practically untouched—most of the work was focused on their cleaning and repairing. It is the building interiors that were significantly transformed in order to introduce the new dwelling units.

the adaptation, several Before window types were found on the main facade-including still Sherbrooke functional original model (from the moment of the building inception) (Fig. 58, top). Designers decided to restore these original windows, and wooden frames with sashes subdivided in 10 small glass panes (Fig. 58, middle) were reapplied to all Sherbrooke Street volumes. This represents an important example of correct restoration of the significant character defining façade element.

Regarding the remaining structures, the stone outbuildings flanking the western and southern sides of the complex (Saint-Dominique and Saint-Norbert Streets) were converted into 22 condominium housing original west-side volume units. The mansard roof and facade walls (St. Dominique Street-Fig. 58, bottom) were Other mainly preserved. interventions included reinforcing the decayed structure, cleaning, repairing, and a general technical upgrading to present standards, including the introduction of modern mechanical systems (Boielau, 285).



#### Fig. 59. Le Monastère du Bon Pasteur

**Top** – Saint-Hubert Street volume façade after the intervention. (Photo 1998); note the new dormer roof with its detail in axonometric view (Boileau, p. 284) as well as encircled new ground floor arched openings

Bottom two – Interior views of a typical new unit (Boielau, 285)

The preservationist approach for the Saint-Hubert Street volume, which implied significant new additions, differs significantly from the strategy adopted for the rest of the complex. The transformation of the original flat roof into a dormer roof with metal sheet cladding was a successful intervention. The new roof, less imposing than both the original adjacent west side mansard roof and the high-pitched roofs of the Sherbrooke volumes, matches well with the existing facade and does not alter significantly its proportions and scale. Its design is an original architectural reinterpretation of original elements-the dormer as a feature typical for this complex was reemployed without literally repeating the original aesthetic. The distinctive yet harmoniously integrated contemporary layer has thus been added to the history of the past transformations. However, not all interventions deserve such a positive evaluation. Creating arched ground floor garage entries significantly damaged the original fabric and cannot be considered the happiest solution (Fig. 59 top).

The fact that the complex was classified as a historic monument in 1979 was beneficial for the overall preservationist success, by helping attract the necessary public attention. However, the overall positive results achieved within this project proved once again that correct preservation is equally dependent on investment of the necessary efforts and funds—aided by the critical contribution of the public—and on the choice of an appropriate design strategy.



### 2.2.5. Le Mont-Saint-Louis<sup>163</sup>

The of original restoration architectural elements that have been altered or destroyed during a building's life<sup>164</sup> is not a preferred solution in current preservationist practice, especially in North America. However, there are cases when exceptions to this rule have justifiably been made, as in several Canadian and Montreal projects, partially restoring some of their missing features. In this particular case, especially in light of the unjustifiable demolition of some important features of the original building only a decade earlier,<sup>165</sup> the selective restoration-at least of the original windows of this three-storey graystone building-may have been the correct option.

#### Fig. 60. Le Mont-Saint Louis

**Top** – Main Sherbrooke St. façade; the original central turrets' balustrades and wooden horseshoe entrance staircase (not clearly visible from the photo) do not exist any more (Photo 1910) (Phototeque *La Presse*; Pinard, 1987, vol. 3, p. 111) **Bottom** – The actual 1989-1990 residential adaptation only confirmed the state found at the moment of intervention, without considering restoring the missing elements (Photo 1998). As shown in the images, the main façade has not been significantly altered over the building's life. Beside the elements demolished in 1979 (see footnote 165), the most notable is the disappearance of the original windows (from the moment of the building conception) (window detail—top) *Le Mont-Saint-Louis* adaptive-use project did not entail their restoration; the new windows are rather replicas of the existing model (window detail—below)

<sup>&</sup>lt;sup>163</sup> The former Mont-Saint-Louis College building, built by *l'Institut des freres des ecoles chretiennes*, is an example of the Second Empire architectural style and is reminiscent of Palais des Tuileries in Paris (1564-1689). (Pinnard, 1987, vol. 3, p. 116) The building was designed by Jean-Zéphirin and built in various sequences. Construction of central pavilion in 1887-88 was followed by construction of the east wing in 1904-05, prolongation of the west wing to l'Hotel de Ville Ave. in 1906-08 and addition of the dome in 1910 (*Le couvents*, p. 284). The Ministry of Cultural Affairs declared it a historical monument on May 17, 1979 (*Les couvents*, p. 282). The adaptation undertaken in 1989-90 introduced 105 condominium housing-units and underground parking for 80 cars (Duret, p. 136). This is the first example of public investment in luxury housing in Montreal. The main role in this preservationist project was played by Phyllis Lambert and "Groupe de Recherche sur les bâtiments en pierres grises de Montréal." The design of the adaptation project was done by architect Claude Gagnon and SIMPA (Société d'habitation et de développement de Montréal) (Duret 136-137).

<sup>&</sup>lt;sup>164</sup> In this case, for example, the original horse-shoe wooden entrance staircase (Fig. 60, top), was later redone in stone (Fig. 61, middle and bottom) to be demolished for the actual adaptive-use project. Also, small-scale subdivided original window sashes disappeared over the building's life (Fig. 60, bottom) (Pinard, 1987, vol. 3, p. 111).





The adaptive-use design strategy adopted was mainly focused on consolidating and maintaining the *status quo*. All 400 existing windows were replaced with identical copies, while the facade was only repaired. Practically the only intervention that is not in accord with such a generally cautious approach which left the exterior almost intact was the transformation of the ground floor and its main entrance (Fig. 61, bottom).<sup>166</sup>

The interior was however totally transformed in order to accommodate new condominium apartments. Even the main entrance turret was adapted into a threestorey penthouse (Duret, 137). The roof and floors were repaired while the structural frame, originally consisting of cast-iron pillars and wooden along the length of the building, was replaced by concrete structure (Pinard, 1987, vol. 3, p. 117).

However, some of the important interior architectural elements have been successfully preserved: arch frames, pilasters and capitals carrying the crests of the religious community, woodwork on staircases, finely worked sheet-metal ceilings, the wrought-iron balustrade grille on the auditorium balconies and some of the original classroom glass partitions (Pinard, 1987, vol. 3, p. 117).

Fig. 61. Le Mont-Saint Louis Top – The turrets balustrades still existed in 1976 (Photo 1976) (Les Couvents, p. 286) Middle – Façade before adaptation (Photo 1983) (Les édifices scolaires, p. 285) Bottom - Façade after adaptation (Photo 1997) (the turrets balustrades were not restored)

<sup>165</sup> East and rear wings, as well as wrought iron roof balustrades were demolished in 1979 (*Les Couvents*, p, 285).
<sup>166</sup> The basement level was transformed into a new ground floor (two new entrances were created), while the existing double staircase flanking the central-volume entrance was demolished (Fig. 61, middle and bottom).



#### Fig. 62. Le Mont-Saint-Louis

**Top** - Central entrance before the adaptive-use intervention (Photo 1983) (*Les édifices scolaires*, p. 285)

**Bottom two** – Central entrance after the adaptive-use intervention (Photo 1997) (note the demolition of the existing double staircase flanking the entrance podium)

are replicas of the existing fourdouble-hung model, pane atypical for this building type (Fig. 60, bottom). However, it that the authentic seems original restoration of the sixteen-pane double-hung sash model typical of the building's inception (Fig. 60, top) (as in case of the previously presented, and only a couple of years older, Le Monastére Bon Pasteur project) might have been, from the preservationist point of view, a better solution.

Newly installed windows

Restoration of the elements original was an of the important part preservationist strategies in the 1960s projects: La maison Del Vecchio, La maison Denis-Viger and La maison Du Calvet (see pp. 47-8. After having been during mostly ignored subsequent decades, the value of these early works seems now to properly recognized by be current practice—later cases

studies will give examples of some of recent Montreal adaptive-use projects that have employed some of their methods, such as restoration of particular character-defining elements—windows receiving the closest attention—fully in concordance with the rule that only elements crucial to the overall buildings' character should be restored and that restoration works should not alter or erase the historicity of the buildings.







#### 2.2.6. Le Manoir de Belmont<sup>167</sup>

The interior of this former convent was completely altered to accommodate 24 luxurious condominiums—new floors were introduced in its east wing chapel (Fig. 57) (Duret, 125). Independently of its final preservationist results, this undertaking proves that new residential use is an excellent choice for securing the survival of derelict convents.

The new metal windows are the most notable new façade feature. While clearly distinguishable from the old stone façade through their brown anodized aluminum frames, they relate to the original architecture through their reminiscence of the original windows' design.

Other exterior changes included:

repositioning of the west facade windows, formerly illuminating the staircase, to align them with the others (the old emergency staircase was also removed) (Fig. 63, top and middle);

transformation of the lateral wings'
entrances into balconies (Fig. 63, bottom)
-conversion of the basement level
into a new ground floor and introduction of

#### Fig. 63. Le Manoir de Belmont

Top – West-wing façade (Photo 1984) (Les Couvents, p, 86)

**Middle** – New windows simulate the original layout. The new residential structure was built in the back (Photo 1999) **Bottom** – The design of new central volume entrance portico is a reinterpretation of the eastern chapel wing cornice (Fig. 59), while the original lateral wing entrances are transformed into balconies (see the encircled detail) (Photo 1999)

<sup>&</sup>lt;sup>167</sup> The former convent *Maison mère des Petites filles de Saint-Joseph*, located at 2333 Sherbrooke St. (at Atwater), is a designated historic monument. Originally designed by the architect Alfred-Hector Lapierre and built in 1910, it was adapted for housing in 1990. The architect of the adaptive-use project was Thomas Reiner (*Les couvents*, pp. 86-7; Duret, p. 125). From the total of 114 residential units, ranging in size from 90 to 280 sq. m, the convent building accommodates 24 of them; 90 are created within the new residential structure joining the convent's back façade. There is also new underground parking (Duret, p. 125).



Fig. 64. Le Manoir de Belmont: Sherbrooke St. Façade (southeast view)

Note the shaping of the new rear volume to accommodate to the convent building, as well as the shape of the gable cornice that served as an inspiration for the new entrance portico design (bottom) (compare with Fig. 57—bottom) (Photo 1998)

the new central wing main entrance (Sherbrooke Street). The triangular detail of the new concrete entrance portico architecturally echoes the east wing gable (Fig. 63, bottom and Fig. 64); while its colour is similar to that of the original stone facade.

Despite the demolition of staircases during the existing transformation of the wing entrances into balconies the demolition of existing staircases during the transformation of the wing entrances into balconies (Fig. 63, bottom), the original character of the building have not been significantly impacted, and the project may be considered quite with the correct regard to preservationist criteria.

Considering the validity of the design statement and the incongruity between the new and existing architecture, there are two main seemingly questionable design solutions:

1) too literal reinterpretation of the west-wing cornice detail by the new main entrance portico design (compare east wing gable in Fig. 64 with portico in Fig. 63, bottom), and

2) lack of a clearer visual distinction between the convent and the new residential structure behind it, to fully secure the spatial autonomy of the heritage architecture. (Fig. 63, middle and Fig. 64)

The positive aspect however is that the new residential volume built in the rear, although much larger, does not significantly disturb the heritage architecture. Thanks to its unpretentious and considerate design attitude, the new volume succeeds to a certain degree in harmonizing with the convent building, which continues to dominate the site. It is achieved through volumetric simplicity and openings that are stylized variations of the convent's windows, as well as, most importantly, by the gradual stepping up of its mass from the convent's height to the top of its 16-storey volume. (Fig. 64)







#### 2.2.7. Le Pavillon Lomer-Gouin<sup>168</sup>

In 1980, former Académie Saint-Louis-de-France and its 1952 wing addition were converted into a cooperative housing project L'Arche de Noé, containing 22 units. Funded by the Sociéte d'habitation du Québec and the Bronfman Foundation, this is one of the first schools to be adapted for housing in Quebec. The low project cost, thanks to minimal intervention, helped to promote adaptive use in Montreal (Boileau, p. 249; Duret, 150). Such a strategy also achieved maximum preservation of the building—an important exception being the treatment of the original windows. In addition to preserving the shell and the structure (what will become the common procedure) designers managed also to preserve existing classroom divisions, floors, staircases and even the heating system.

However, new aluminum frame casement windows, replacing the original ones, damaged this otherwise quite successful preservationist achievement. This particular window model became characteristic of school adaptations in the early 1980s—inexpensive and thermally adequate but, because of its inability to address the original architecture, inappropriate for heritage buildings.

Fig. 65. Cooperative Arche de Noé Top – Main volume before (Boileau, p. 248) Middle – Main volume after (Photo 1998) Bottom two – Old windows (Boileau, p. 248) and new windows (right) (Photo 1998)

<sup>168</sup> This 1891 graystone and brick building, built by an unknown architect, is located on 161 Roy Street East in the Plateau Mont-Royal. The annex was added in 1952. Architect Vianney Bélanger did the design for the adaptive-use project, completed in 1980 (Boileau, p. 249; Duret, 150).



The layout of the new units' is based on well-illuminated rooms set around a service core containing the kitchen, bathroom, and closet. Several of them were built as loft (single space) units. This project has been recognised through the 1982 Canadian Foundation for Heritage Preservation Award (Duret, p. 150).









# Fig. 66. Cooperative Arche de Noé

**Top** – Annex volume (1952) prior the intervention (left) (Boileau, p. 248)

Middle left - Annex volume after the intervention (Photo 1998)

**Middle right** – The new unit interior view (left)

**Bottom** – New typical floor arrangement (Boileau, p. 248), with typical 'loft unit' model (right) (Boileau, p. 249)





#### Fig. 67. Les Habitations de la Menais

**Top two** – School building before the adaptation (Photo 1974; *Les edifices scolaires*, p. 261)

Bottom - School building after the adaptation (Photo 1998) (note the new backyard volume at the left margin—see also Fig. 62)

# 2.2.8. Les Habitations de la Mennais<sup>169</sup>

This adaptive-use project introduced 34 low-cost housing units into the old four storeys red brick school building and another 78 units within the new six-storey structure occupying the school courtyard (Duret, p. 162). The new structure is a typical residential building that has nothing in common with the architecture of the school. The two volumes are joined with the architecturally neutral volume containing the common core with communal terraces.

Except for the new metal framed window replicas with single-paned sashes that replaced old wooden doublehung windows with four-paned sashes—no other new elements have been added to the façade. The main entrance was

carefully preserved and despite the demolishing of the crown elements, which altered the distinctive original building silhouette, the overall result qualifies this project as an appropriate preservationist undertaking. This is especially true since this is one of the earliest school conversions in Montreal. Its success is further confirmed by the fact that similar methodology and results are noticeable on currently undertaken projects that have the benefit of more than two decades of school conversion experience.

<sup>&</sup>lt;sup>169</sup> The original architect for the former Académie Saint-Paul, built in 1900, was Eugène St-Jean. The building is located at 6510 St-Denis Street, at the corner of Beaubien, in the Petite Patrie neighborhood. In 1981, it was acquired by the City of Montreal and in the same year adapted into the 31 one-bedroom and 3 two-bedroom low-cost housing units for senior citizens in the area. Design was done by C.I.D.E.M. (Commission d'initiative de development de Montréal) under the direction of Lean-François Gravel (*Les edifices scolaires*, p. 260-61; Duret, 1992, p. 162; Boileau, p. 251).







#### Fig. 68. Les Habitations de la Menais

**Top** - Adapted school building: typical floor plan (Boileau, p. 252) **Middle left** - View of the new rear residential structure (school volume is at the right margin) (Boileau, p. 252) **MIddle right** - Curtain wall façade of the common core volume, joining

**MIddle right** - Curtain wall façade of the common core volume, joining the school building and the new residential structure (Boileau, p. 252) **Bottom** – First floor interior view of the common core volume (Boileau, p. 252)





# 2.2.9. Les Habitations Le Retour à l'École<sup>170</sup>

This late-1920s school building was transformed into 38 cooperative housing units in 1982.<sup>171</sup> The façade (terracotta blocks and brown brick cladding) and original reinforced concrete structure were in good condition and were not significantly altered during the adaptation. Conversely, all interior partitions, mechanical services and windows were removed. Only the shell, the structure and two staircases located at the opposite extremes of the central corpus were kept.<sup>172</sup>

Façade preservation was a design paramount. It excluded significant new additions, such as balconies, or destruction of the existing elements (Sheppard, 1983). The exception was a fifth-floor attic addition to the central wing, containing mainly bedrooms belonging to the fourth-floor units. Already 2m high, the original parapet was heightened another 1.2m, bringing to the same level the central and flanking wings

Fig. 69. Les Habitations Le Retour à l'École Top – Main facade before the adaptation (Photo Gérald Paul Merckel; Sheppard, 1983) Bottom – Main facade after the adaptation (Photo 1998)

<sup>170</sup> Former Marius Barbeau Secondary School, originally Collége Saint-Ignace, at 2919 Bellechace Street in the Rosemont neighborhood, was originally designed by architect Alphonse Piche and built in 1929 (*Les édifices scolaires*, p. 61).
<sup>171</sup> Adaptive-use design was done by *Sheppard, Dione, Laflamme Architects*. The aim was to install the maximum

<sup>171</sup> Adaptive-use design was done by *Sheppard, Dione, Laflamme Architects*. The aim was to install the maximum variety of unit types, including a certain number of two-storey units. There are 10 one-bedroom, 14 two-bedroom, 12 three-bedroom and 2 four-bedroom units. Three units were designed for handicapped persons. Thanks to the units within the newly built roof-top (attic) addition and those created by partitioning of the 6m-high chapel space, the number of units increased from 27 to 38. There are 13 maisonnettes and five of them have access to the new attic galleries (Sheppard, 1983).

<sup>172</sup> New slab was introduced in the two-storey chapel space that formerly occupied upper two floors of the western wing (Fig. 62 bottom—left margin). The basement floor was raised 60 cm in order to create a more residentially appropriate relation to the windows and the garden level. The original wooden floors and floor finish in corridors were preserved (Sheppard, 1983).





without significant volumetric alteration of the whole. Original double-hung sash windows were replaced by new ones with a similar aesthetic.

The new attic design is basically an extension of the original architectural expression. The same materials and similar window layout were chosen. The simple brick surface without cornice also contributes to the relatively neutral statement. Considering the size of the entire building volume, this was a relatively minor intervention, making its non-contrasting attitude a correct and sensible choice.<sup>173</sup>

One especially important aspect, rarely found in similar recent examples, which makes this project valuable as an example of appropriate unit design, was the creation of the cooperative housing of unusually high quality normally expected only in condominium projects.<sup>174</sup> A pioneering endeavour, this is an excellent example of a correct approach from both a preservationist and a housing perspective, which helped set a sound system of values that influenced many subsequent projects.

Fig. 70. Les Habitations Le Retour à l'École Top - Drawing featuring the main façade after the adaptation (Sheppard, 1983) Middle – Central wing after the adaptation (Photo 1998); note the heightening of the central wing parapet which screens the new attic addition Bottom – Interior view of the typical new attic space

**Bottom** – Interior view of the typical new attic space (Sheppard, 1985)

<sup>&</sup>lt;sup>173</sup> Intervention is fully in accord with the recommendation given by FNBRO: "Additions of the modest scale, in almost all cases, should seek to harmonize with the design characteristics of the existing building" (*FHBRO Code of Practice*, excerpt from the intervention guideline 3.3, p. 32).

<sup>&</sup>lt;sup>174</sup> The project was completed within the budget and timeframe, respecting all CMHC-recommended standards for modest housing while introducing unquantifiable values brought by the exceptional attributes of the original architecture: interior spaciousness, robustness of the materials and building structure, and finally historic and symbolic meaning (Sheppard, 1990b).



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Fig. 72. L'Alternative de Verdun Top - Original façade before the adaptive-use intervention (Photo 1980; Les édifices scolaires, p. 197) Bottom - Main façade after the adaptive-use intervention (Photo 1998) Also compare juxtaposed details of old and new windows

## 2.2.10. L'Alternative de Verdun<sup>175</sup>

With the exception of the fire stairs, the interior of this obsolete Verdun school was completely gutted and rebuilt during its conversion housing into a cooperative. The adopted strategy was similar to that of Retour a l'école project, executed by the same architects. However, in this the ground floor was case modified. New entrances were placed on the ground floor, where some excavation work was done to increase the floor-to-ceiling height and provide an appropriate relation to the windows The original entrances were transformed into 1958 balconies-existing staircases, with practically no architectural value, were demolished.176

The original wooden casement windows, subdivided into six glass panes, were replaced with inexpensive and easy to maintain new aluminum frame windows. This window model, quite inappropriate from a preservationist standpoint, and applied in several other adaptive-use housing projects in the early 1980s, reveals the limitations of the window market during the initial phases of the practice. Only later did adaptive use create a market and an industry for custom-made windows. Today, it can satisfy practically all design demands, whether it is a case of accurate replicas of original windows (using either original or contemporary materials), a contemporary reinterpretation of the original design or entirely new

<sup>&</sup>lt;sup>175</sup> The former Académic Richard (200-206 Galt Street—Verdun) is a linear school building built in 1908, according to the architect Alphonse Piche's design. Architect J.E.A. Benoit designed its enlargements, which were carried out until 1924. The building's structure consists of the exterior red brick bearing walls and a wood-joist floor assembly supported by the structural steel-frame. The architects of the 1981 adaptive-use project were from Sheppard, Dionne, Laflame Architects. They introduced 37 cooperative dwelling units into a completely gutted interior, preserving only the shell (Sheppard, 1990b; Les édifices scolaires, p. 197; Duret, p. 98). <sup>176</sup> Interview with Professor Sheppard, one of the project designers (Nov. 15, 1999).



contemporary design. Modern technology is applied in almost all cases-even where the original windows are completely restored, contemporary thermal solutions are sometimes with old woodworking applied together techniques. This allows architects an unprecedented design freedom, but at the same time, by removing the technological limitations increases the designers' argument, responsibility for conceiving the solutions that satisfactory from architectural are (preservationist & housing) and economic (energy conservation) standpoints.

#### Fig. 73. L'Alternative de Verdun

**Top** – Detail of the former entrance transformed into a balcony (Photo 1998) (note the new aluminum frame windows that replaced the original six-paned wooden windows)

**Middle** – Axonometric view depicting new façade and new top-floor layout (Sheppard, 1990b)

Bottom - New ground floor layout (Sheppard, 1990b)





#### 2.2.11. Le Dolmen<sup>177</sup>

This is another early-1980s project executed by Sheppard, Dione, Laflame Architects.<sup>178</sup> The inside of the original Boucher-de-la-Bruère school building was gutted and rebuilt, as in the two previously presented projects. Only the fire stairs were spared. As in Le Retour a l'École, which had its spacious chapel subdivided into apartments, this school's double-height assembly space, occupying the ground and the first floor of the central wing, was also subdivided into housing units after introducing the new slab.

Windows were replaced with new metal models very much reminiscent of the original design. Together with the well-preserved exterior—including the original entrance stairs—the project reveals an unusually sensitive approach,

Fig. 74. Le Dolmen Top – Main façade before the conversion (Photo 1976; *Les édifices scolaires*, p. 17) Middle two – Main façade after the conversion (Photo 1998)

<sup>&</sup>lt;sup>177</sup> The building was originally designed by architect Zotique Trudel and built in 1913-14. It has reinforced concrete frame and bearing masonry exterior walls. It is located at 1617, Lepailleur Street in Longue-Pointe. Adaptive-use project envisioned a total of 31 cooperative units (Shepard, 1990b).

<sup>&</sup>lt;sup>178</sup> Its main characteristics are shared with their two earlier projects—*Le Retour a l'École* and *L'Alternative de Verdun*. All three undertakings were carried out within the brief period between 1982 and 1984. Members of the cooperatives were involved in the design process; this enabled them to realise to the maximum possible extent their individual and communal preferences: "The architects' design approach, the methodology of work, and the client's attitudes were similar in all three cases. The principles of design and the means of client participation that were formulated for the first project were fine-tuned for the second, and perfected for the third" (Shepard, 1990b).



considering that it was completed in 1984. Also surprising is the amount of attention given to this old school despite the fact that schools are not normally regarded as a firstclass architectural heritage deserving maximum preservationist attention.

#### Fig. 75. Le Dolmen

**Top** – Detail of the preserved main entrance (Photo 1998)

**Right** – Typical corner unit (Sheppard, 1990b) **Bottom** – New ground floor layout (Sheppard, 1990b)









### 2.2.12. Le Bourg Christopher-Colomb<sup>179</sup>

Design architects from the firm *Sheppard*, *Dione*, *Laflame* are not very proud of this project envisioning 30 condominium housing units, their project participation being limited only to the completion of the working drawings.<sup>180</sup>

The original exterior entrance staircase was demolished and replaced with a new ground-floor entrance porch in the form of an awkward and incomplete concrete structure (Fig. 76), while the original first floor entrance doorway with stone doortrim was transformed into a French window. The new windows with their wooden frames and double-hung system are similar to the original ones.

Notable is the extra effort used to give the building a residential allure. This is exemplified by the typically residential appearance of the newly introduced balconies which are not in harmony with the character of the original façade. Their convex and archaically shaped metal railings have no architectural value; while not entirely appropriate design solution, the neutral approach most frequently achieved through industrial aesthetic would have been a much better choice.

#### Fig. 76. Le Bourg Christophe-Colomb

**Top** – Street façade prior the adaptation (Photo 1978; *Les edifices scolaires*, p. 29)

**Bellow** – Façade views after the adaptive-use intervention (Photos 1998). Note the encircled and enlarged details of the new balconies and the new entrance porch

<sup>&</sup>lt;sup>179</sup> The former Academy Christophe-Colomb was designed by architect L. R. Montbriand and built in 1910. The address is 6891, Christophe-Colomb Avenue. Prior to its 1985 adaptation for residential purposes, it housed the Centre de secrétariat et de commerce.

<sup>&</sup>lt;sup>180</sup> The developer who took over the adaptation completed it without following exactly their design, autonomously introducing significant changes in relation to the design concept as envisioned by the architects. Illustrative is the developer's disregard for the intrinsic potential of the original spaces; suspended ceilings were installed lowering by a meter the typically high original floor-to-ceiling heights. The inherited interior spaciousness was thus diminished and the original character significantly altered, giving the units a standard residential look (Interview with Professor Adrian Sheppard, Nov, 15, 1999).



#### 2.2.13. D'Arcy McGee<sup>181</sup>

This recent adaptation of a former high school is a typical example of the current adaptive-use methodology in Montreal involving buildings of a lesser heritage value. It summarizes well the Montreal adaptive-use experience that has been shaped by a multitude of factors and influences: from market forces, changes in society and its attitudes, including the general preservationist continuing evolution of culture to the preservationist and adaptive-use attitudes. This project also identifies the present state of mind in especially the attitude towards Montreal, architectural and cultural heritage, and urban living.

Before being allowed to start the project, the developer had to overcome the hurdle of obtaining the green light from the heritage authorities: the City of Montreal, the Viger the Commission and Commission du patrimoine du parc Mont-Royal, which assured that the building's transformation would not depreciate its heritage character (Goulet, 1998). The exterior was cleaned and correctly preserved, in spite of introduction of several new windows, entrances and metal balconies. Window sizes vary between

Fig. 77. D'Arcy McGee Top – Facade before the adaptation (northeast view) (Photo 1976; *Les édifices scolaires*, p. 285) Middle – Facade after the adaptation (northeast corner) (Photo 1998) Bottom – Façade after the adaptation (northwest view) (Photo 1998)

<sup>181</sup> Former Thomas D'Arcy McGee High School is situated at 220 Des Pins Ave. West. It was designed by architect Irénée Vautrin and built in 1931. Abandoned in 1992 for lack of pupils, the former anglophone high school was adapted for housing in 1998, creating 61 condominium units.
## 2.2. Institutional Buildings







2.5 m, on the main street façade, and 3.7 m on the rear gymnasium volume. Heritage authorities were specific to the point of dictating the colour and shape of the new window frames (Goulet, 1998a).

According to school conversion routine, the interior was completely gutted—all partitions, installations and floor finishes were removed. Basically only the structure was preserved. The original wooden floors that appeared after stripping the linoleum were repaired and reused. New floor slabs were introduced into the former gymnasium and auditorium, increasing the number of units, (Goulet, 1998b) but not without negative repercussions. Generally, while classroom floors easily accommodate residential use without significantly affecting their architectural integrity, partition of the large integral spaces such as gymnasiums or auditoriums completely alters both their interior space character and their facade composition (Fig. 79).<sup>182</sup>

The project also reveals the actual market requirements; units are in between the modest cooperative housing and the luxurious condominiums—their size varies from 72 to 155 m.<sup>2</sup> Ceiling heights vary between 4.3 and 4.9m, which allowed the introduction of mezzanines (Fig. 78, bottom); units without a mezzanine have an additional

Fig. 78. D'Arcy McGee Top –Original entrance was fully preserved (Photo 1998) Bellow – Detail of the new balcony (Photo 1998) Bottom – New unit interior—spiral staircases lead to the interior mezzanines (Photo Chamberlad, Martin; Goulet, 1998)

<sup>&</sup>lt;sup>182</sup> If economic arguments supported keeping of these spaces in their original form and using them, for example "as auditorium or gymnasium for the condo residents or the neighbourhood" (Theodore, 1998), their original spirit and atmosphere would be much better preserved, while buildings would be more easily reintegrated into the community.

## 2.2. Institutional Buildings



enclosed room. Most of them are open-plan (loft) units. Few clients expressed the wish of joining the two adjacent units in order to create a single larger one. This opportunity could be offered only during the design and initial construction phases, which proves the intrinsic flexibility of the original open spaces which disappears or is drastically reduced after the space is subdivided.

The ground floor units have individual entrances, while the rest are accessed by the well preserved main Des Pins Avenue entrance (Fig. 78, top). Some of the ground floor units are connected to the semi-private gardens; for the units that do not have balconies, a communal terrace on the roof was provided. In addition to street parking places, which are reserved for the residents, there are 27 interior parking spaces—enough for such a centrally located building, where dwellers often do not own cars.<sup>183</sup>

#### Fig. 79. D'Arcy McGee

**Top** – Rear façade view (Photo 1998). The volume on the left is gymnasium and auditorium transformed into units. Original façade openings were difficult to adapt to the new residential layout.

**Middle and bottom** – Interior of the gymnasium (upper) and typical floor before the adaptation (Photos Chamberland M; Goulet, 1998)

Even though most often their entire interior has to be gutted, conversion of the classroom floors into apartments may be considered as acceptable—the new residential floor layout being similar to the original classroom distribution. However, the same does not apply to the school gyms, or similar spaces, when, due to their particular original design the final negative effects on both interior and facades are far greater.

<sup>&</sup>lt;sup>183</sup> The new inhabitants are mainly people over 30 years old, about half of them single—professionals working nearby and former students attracted by the idea of reviving their memories by inhabiting the building that played such an important role in their lives (McGovern, 1998). It confirms the symbolic importance of the old schools and similar landmarks for the local residents.





Fig. 80. Le Castel Top: Southwest view after adaptation (Photo 1998) Bottom: Southeast view after adaptation (Photo 1998)

## 2.3. Other Building Types

## 2.3.1. Garages

A number of former garages have also been converted for a variety of uses, including housing. Their favourable central locations and original design characteristics—such as solid concrete construction and unpartitioned floors—are the main advantages when their adaptation is considered. Due to their specific use requirements, garage buildings do not have high floor-to-ceiling heights. However, old multistorey garages, especially those dating from the 1920s, have spacious interiors which, although slightly lower than those in most old industrial buildings, are still quite favourable for the residential use.<sup>184</sup>

## 2.3.1.1. Le Castel<sup>185</sup>

This residential condominium project is chosen as a typical example of the entirely pragmatic approach unconcerned with the original building aspects. Only the structure and partially the shell of this early 1920s garage building survived its 1989 adaptation.

Little remained of the original architecture that might indicate the building's original use and nature. Two new floors, added on top of the building, together with new balconies and windows, completely changed building's proportions, scale and character.

<sup>184</sup> Depending on other design elements, high floor-to-ceiling heights are not always crucial for successful residential adaptive-use design. As we have already seen, *Cours le Royer* still produced well illuminated and spacious residential units— achieving the desired "loft look"—despite its, for Victorian commercial buildings, unusually low floor-to-ceiling heights.

<sup>&</sup>lt;sup>185</sup> The address is 1275 Van Horne, Outremont. The original architect is unknown. The adaptive-use project architect was Kimon Caragianis; the project was completed in 1989. Offices and commercial activities were put on the first two floors, while 32 condominium units were inserted on the upper floors (Fig. 80). The underground garage was added (Duret, 1992, p. 143).



Fig. 81. Le Clos Saint-Bernard Top – Photo 1981 (Archutecture industrielle, p. 258) Middle – Photo 1998 Bottom – Interior view (Boileau, 1990, p. 275-6)

## 2.3.1.2. Le Clos Saint-Bernard<sup>186</sup>

Le Clos Saint-Bernard adaptive-use project introduced new housing units within both this old St. Bernard Street garage building and its new two-storey rooftop addition (Fig. 81, middle). Apart from this significant new architecture introduction, other exterior changes included the replacement of the original fenestration as well as smaller-scale introduction of new metal elements: a new main entrance canopy and window railings (Fig. 82). In the interior, stately columns with mushroom-shaped capitals are left exposed, while suspended ceilings hide the rest of the structure (Fig. 81, bottom).

Each particular design solution reveals the original design approach and style, especially if compared with other projects. Starting with new windows, they are far from being a replica of the original multiply-subdivided glass panels. Instead, architect seems to have been focused on using the new window design to express the building's new mixed-use nature, emphasising the former garage function and drawing inspiration from its aesthetic. The combination of single-paned vertically divided robust dark metal windows frames, with wrought iron elements placed on spandrels below each opening, successfully

<sup>&</sup>lt;sup>186</sup> The former Bernard Avenue Garage in Outremont (1169, Bernard Avenue) was built in 1924 by architects Jean-Julien and J.R. Gadbois. The project architect for this 1986/87 adaptive-use project was Dan Hanganu. He envisioned commercial space on the ground floor, offices on the first and second floors, and 24 housing units, placed on the 4<sup>th</sup> and 5<sup>th</sup> floors and two newly added rooftop levels. Units vary widely in layout: 3, 2 and 1 bedroom units, together with 4 penthouses and 2 loft units (Boileau, p. 275; Duret, p. 143). Interesting is that this is not the first adaptive-use intervention on this building. Its 1980 transformation into cooperative housing (architect Victor Grusko) was short-lived (*Architecture Industrielle*, p. 259).



achieved a residential look. Moreover, it is also appropriate for the offices and commercial spaces on the lower floors. The choice of elements, materials and colours is reminiscent of the former use and emphasizes the original Art Deco façade.

The connection between the contemporarily conceptualised rooftop structure and original façade, defined by fine brick- and stone-work, is achieved through the partial application of common materials. While part of the new volume exterior is in a contrasting manner clad with dark sheet metal—matching the rest of the newly introduced metal elements—slightly lighter bricks and artificial stone elements, recombined in a different manner, were applied to its new masonry panels.<sup>187</sup>

An especially successful link with the original character of the building was achieved through the automotive aesthetic of the new entrance canopy and balustrade details of the new 6<sup>th</sup> and 7<sup>th</sup> floors, giving the building a particular signage absent in the original (Fig. 82).



**Top** – Main street façade—central part. Note the new rooftop volume with its masonry panels executed in brick and artificial stone and balustrade-like metal elements (Photo 1998)

**Middle two** – New main entrance canopy (Photos 1998) **Bottom** – Important new character defining details are new dark metal windows and window railings (Photo 1998)

<sup>187</sup> An interesting detail is that at the ground floor the artificial stone blocks alternate with original recuperated bricks <a href="http://www.hanganu.com">http://www.hanganu.com</a>>.





The new rooftop structure, with its what at first freely glance seem to be distributed shapes, is an important compositional element complementing the original architecture. It effectively uses the asymmetry of the original building volume to create a new building contour contributing to the street skyline (Fig. 83, top two).

Although the entire concept is based on balancing among many requirements, it is hard to deny the strength in its expression and its contribution to original architecture. This project combined the best tenets of both the preservationist practice and new architecture, and therefore more than deserves the 1987 *Sauvons Montréal* distinction.

Fig. 83. Le Clos Saint-Bernard Top and middle – Southwest views (Photo 1998) Bottom – Interior views of the new penthouse units. <http://: www.hanganu.com>





Fig. 84. Les Tours du Parc-Westmount Top – Photo 1980 (Pinard, 1987, vol. 5, p. 320) Below – Northwest view to the completed project (Photo 1998); note the addition of the four new floors to the rear volume

## 2.3.2. Les Tours du Parc-Westmount

The former Harrison **Brothers** Bakery, one of Montreal's major bakeries, originally consisted of the two distinct volumes: an original 1931 front building-for Montreal, an unusual example of the "Mission" Style<sup>188</sup>—and a four-storey 1953 rear addition (Fig. 84, top). Both volumes employed a reinforced concrete frame construction system. Regarding their exteriors, the façade of the original volume, mainly fawncoloured brick with details in freestone-the appearance of which was simulated on the surface of the concrete base-was juxtaposed to the simple brick façade of the 1953 annex (Pinard, 1987, vol. 5, p. 315).

Photo from 1980 (Fig. 84, top) shows the state before the 1986-88 adaptation,<sup>189</sup> during which both structures were altered to different degrees. While the shell of the 1931 building has been mainly preserved, the annex volume was completely transformed by adding four additional floors on top. Only its structural frame was reused—its façade was completely redone in order to achieve uniformity with the new floors; terraces and balconies were added or carved out of the existing structure.

According to Pinard, the architect's intention was not only to distinguish clearly the new architecture from the original one, but also to develop a modern aesthetic around the original volume features in order to create a harmonious whole (Pinard, 1987, vol. 5, p. 322). While the modernity of the final result could be a topic for a debate, it is clear that the significantly enlarged rear structure, having all the attributes of a new conventional housing project, hardly relates to the original front building.

<sup>&</sup>lt;sup>188</sup> The original building, designed by English-born architect Sidney Comber, was completed in 1931. Its aesthetic, in this case notable for its roof with red slate tiles, is believed to be drawn from either Spain or California (Duret, p. 123).

<sup>&</sup>lt;sup>189</sup> The adaptive-use project was executed in the period 1986-88. The architectural firm Jacques Bérques et associés envisioned 82 luxurious condominium housing units, including three penthouses, a health club, and the parking garage in the rear (Duret 123).







Intervention on the original building façade included window replacement and the addition of light metal balconies on the turrets and wings. Some of the windows were sacrificed to make way for the new main entrance.

The addition of semicircular small balconies to the original volume, giving a desired residential touch without altering significantly the former character, is a successful solution. Also, the new custom-made windows are a correct reinterpretation of the old ones, proving that, in relation to the practice earlier in the decade, treatment of new fenestration evolved in the late 1980s-in the sense of both the application of the technology and a more sensible design approach. However, the new

entrance porch with its red sheet-metal roofing is executed in an unconvincing contemporary manner and is one of the most questionable new elements. It does not have a rapport with the original architecture and unsuccessfully attempts to address the building's roof and its red slate tiles.

Despite certain common aspects, such as the choice of similar materials, the two building volumes have independent characters. However, while it is obvious that the larger one dominates the site simply by its sheer size, the smaller 1931 building has not lost much of its significance and spatial autonomy. Although quite different, the neutral statement of the larger structure leaves plenty of space for the original expression of the smaller structure.<sup>190</sup>

<sup>&</sup>lt;sup>190</sup> Le Manoir de Belmont project (pp. 120-1) deals with the similar design issues.



## 2.3.3. Les Cours Mont-Royal<sup>191</sup>

The former Hotel Mont-Royal, the largest hotel in the British Empire at the time of its completion in 1922, was transformed into a mixed-use complex in the late 1980s. Substantial exterior interventions did not greatly affect its original character.

Clearly visible original façade alterations included: removal of the cast-iron main entrance marquee, alteration of the ground floor arcade openings to accommodate new shop windows, replacement of original double-hung windows with modern single-pane models and widening of the original windows openings to the width of the newly introduced metal-frame balconies.

The new features include: rooftop and street level additions, entrances, fenestration, balconies and glass curtain walls linking the building wings. All new elements give the impression of being independent of the original structure—but do not attempt to impose their design statement. They contrast with the original structure mainly through the choice of materials—aluminum and glass are juxtaposed with the existing pink marble, graystone and gray brick. Although clearly different, contrasting and belonging to their own time, the new additions adopt the principal attributes of the original architecture; their proportions, scale and colours are derived from the original corpus, fitting harmoniously into the existing context. This is especially valid for roof additions. The new metal balconies emphasize the hotel's

### Fig. 86. Les Cours Mont-Royal

**Top** – Peel Street façade before the adaptation (*Les Hôtels*, p. 266) **Bottom** – Photo 1998; note the new balconies, rooftop additions and altered ground-floor arcades.

<sup>&</sup>lt;sup>191</sup> Architects Ross and McDonald designed the original building, completed in 1922,, while the adaptive-use project, designed by Arcop Associates architectural firm, was completed in 1988. It included 134 luxury condominium housing units, 28 000 sq. m. of office space, 150 commercial stores and variety of other services (Duret, 126). The building occupies an entire block bounded by Boulevard de Maisonneuve, Place Mont-Royal, and Peel and Metcalfe Streets.



new residential nature without interfering much with the original façade—in part due to the hotel's original residential character. The result is a well-arranged ensemble that successfully blends old and new, without limiting their individual expression.

Besides rooftop and street-level additions, underground parking and glass roofs over four existing interior courts were built. The interior was significantly increased and completely redone. Heavy old concrete and terracotta partition walls were eliminated, significantly reducing the strain on the structure. Original chandeliers and lavish original decoration-especially marble, terrazzo, bronze, wrought iron and woodwork in the main hall-were preserved and repaired as much as possible (Duret, 127).



**Top** – Corner between Peel Street and De Maisonneuve Boulevard (Photo 1998)

**Middle two** – Rooftop addition on the corner between Peel Street and Place Mont Royal (left) and new Peel Street curtain wall, linking the hotel wings (right)

**Bottom two** – New shops addition at the corner between Peel Street and Place Mont Royal (left) and Peel Street new entrance with shops addition above it, replacing the original cast-iron marquee (right) (Photos 1998)



Fig. 88. Lofts Hogan Top – Photo 1932 (Les édifices publics, p. 16) Bellow – Photo 1981 (Les édifices publics, p. 17) Further bellow - Photo 1998 Bottom left – Lateral façade (Photo 1998) Bottom right - Interior view during adaptation (Hébert, 1998; Photo by Nadon, Robert)

## 2.3.4. Lofts Hogan<sup>192</sup>

As an important part of Montreal history, public baths deserve special attention.<sup>193</sup> The first city bath was built in 1909, as a prevention of diseases caused by poor hygiene level in 19<sup>th</sup>-century working class neighbourhoods. By 1915, Montreal had about a dozen public baths (Siblin, 1996), mainly built in the Art Deco style.

This 1932 public bath, built of white stone and red brick, was converted into housing in 1998. Apart from window replacement, the white stone façade did not undergo major changes. The surviving original windows had been replaced by similar a thermally-advantageous and inexpensive model.

While the exterior was mainly in keeping with the original appearance, the interior was completely transformed-formerly large interior spaces with pools and other baths facilities were converted into 17 open-plan units, with mezzanines, roof-top terrace and back facade balconies. With the exception of a few new window openings, the developer kept his promise of keeping to a minimum the alteration of the original structure, but the subdivision of the large open interior space into very small units-ranging between 60 and 100m<sup>2</sup> (Hebert, 1998)—erased the evidence of the former use and building's original interior atmosphere.194

<sup>&</sup>lt;sup>192</sup> This former bath is located on the corner of Wellington and Marquerite-Bourgeoys Streets, in Pointe-Saint-Charles. The architect of the original building was D. Jerome Spence (Hébert, 1998).

<sup>&</sup>lt;sup>193</sup> According to Dinu Bumbaru of Heritage Montreal, they are "one of Montreal's distinctive characteristics from an urban-heritage point of view" (Siblin, 1996). <sup>194</sup> On preservation of the buildings' social component, including the comment on this project see Theodore (1998).







## 2.3.5. Henry-Julien<sup>195</sup>

Two different preservationist approaches were employed in this project, clearly distinguishing the nature of the interventions on the front part from those on the rear part of the building.

The central volume, with its newly installed fenestration enclosing its originally open balconies, divides the building into two clearly defined wholes—the front part and rear part (Fig. 89).

A fifth floor was added to the front part and aligned with the existing fifth floor of the central volume (Figs. 89, bottom and 90, top). It illustrates a safe and relatively sensible approach. While it is respectful of the original building character, thanks to the relatively neutral expression, its bare structure and modern glass infill make it an evidently contemporary structure, easily distinguishable from the original volume.

The designer combined existing and new architectural elements, managing to create a harmonious composition sympathetic to the original structure. Thus the new fifth-floor cornice, a successful stylization of the existing one, smoothly joins the existing cornice of the central part, aesthetically linking the new and the original architecture.

Fig. 89. Henry-Julien Top – Photo 1900 (*Les Edificies publics*, p. 174) Middle – Photo 1974 (*Les Edificies publics*, p. 170) Bottom – Photo 1999 (after the adaptation)

<sup>195</sup> Former Hospice Auclair (also former orphanage), located at 4220 avenue Henry-Julien, was converted into 62 condominium residential units in 1998. The project was awarded DOMUS 97 award for conversion/renovation of the year. It also received ÉMÉRITE 97 award for the residential project of the year (Lamey, 1997; <a href="http://www.racheljulien.com/large.html">http://www.racheljulien.com/large.html</a>).



#### Fig. 90. Henry-Julien

Top – the new fifth floor was added to the front part, while central part was completely fenestrated (Photo 1999) Below – The rear part consist of two volumes (Photo 1999) Further below – New rear part dormers (Photo 1999) Bottom two – Interior images: sixth floor unit during the early stages of the work (left) and interior of the second floor inhabited unit (right) (Lamey, 1997) The rear part of the building consists of two volumes (Fig. 90: middle two). A new fifth floor, a replica of the traditional 19<sup>th</sup> century dormer construction, is added to the rearmost volume. The same treatment was applied to the existing fifth floor of the adjacent volume (dormers have been added to the originally flat façade wall, integrating the two volumes).

Although this is compositionally and aesthetically a relatively successful solution, giving a new pleasing dimension to the entire rear half of the building, the appropriateness of such an approach is highly questionable with respect to historical authenticity. Examination of the photos from 1900 and 1974 reveals that dormers never existed, either in this or any other form, thus making them in opposition to the fundamental preservation principle that the new work must clearly reveal the time of original construction—the final impression being that these are the original 19<sup>th</sup> century features.

The approach adopted for the front part did not produce a remarkable architectural statement it is not as strong an expression of current design as the original building design was of its own time. On the other hand, the obviously contemporary interventions are quite neutral and unassuming, and do not endanger the original building's character.

The rear part design strategy, however, employs features and techniques belonging to the age of the building's conception, thus creating confusion about the dormers' creation period—an approach for which is hard to find any satisfactory argument.



Fig. 91. Bluestone Lofts Top – Photo 1998 Bottom – Interior of the new residential unit (Photo by Rémi Lemée; Hébert, 1998)

## **2.3.6. Bluestone Lofts**<sup>196</sup>

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The conversion of this 1924 Beaux Arts building into 16 residential units represents another recent example of residential adaptive use in Old Montreal. The façade made of striated bricks and Kingston stone, was not significantly altered; existing windows have been replaced with a modern thermo-efficient model, custom-made to imitate the original appearance.

While the exterior has been left intact, the interior was altered to different degrees—depending on the floor. Firstly, ground floor was altered in order to accommodate the garage, while the four upper floors were divided into four residential units each. Secondly, not all floors were equal; the top (fourth) floor, thanks to the bridge-like roof structure, was originally an open space without divisions or columns. <sup>197</sup> Nevertheless, it received the same treatment as the three conventionally constructed floors below. This is another example where large undivided character-defining space was sacrificed by partitioning it in order to create dwelling units.

Hardwood floors, original concrete ceilings and gypsum walls are the final interior surfaces. The simplicity of both the original and adaptive-use designs was beneficial in the sense that it helped to simplify the intervention, and reduced the destruction of the original fabric to a minimum.

<sup>197</sup> The construction system of the roof is actually the adapted bridge structure which spanned the entire fourth floor space, originally sheltering the boxing ring and podium (Hébert, 1998).

<sup>&</sup>lt;sup>196</sup> The original building was completed in 1924 by the *Dominion Bridge* company. The architectural firm *Provencher*, *Roy et associés* was responsible for the adaptive-use design. Project was completed in 1998, creating 16 "loft" units on the upper four floors, with parking space on ground floor. The building is on the corner of Bonsecours and Champ-de-Mars Streets (Hébert, 1998). The "Bluestone Building" was named after the shirt-maker whose headquarters were in the building for years, after its original use as a club for dockworkers (Theodore, 1998).





## 2.3.7. Project Condos AppLoft – Second Phase<sup>198</sup>

This project has been chosen to conclude the review of case studies not only because it is one of the important recently completed undertakings but also because it illustrates the current stage of evolution of Montreal's adaptive-use practice and, from the preservationist point of view, probably the best what it has to offer at the moment.

This exceptional heritage building was erected in 1866 and served for a number of years as the headquarters of *Le Devoir* newspaper. From the preservationist point of view, this is one of Montreal's most carefully approached adaptive-use projects and it clearly illustrates the significant degree of development of both preservationist culture and adaptive-use practice in Montreal. The building's existing state was mainly conserved, proving that it is possible to change the building's function with minimal alteration to the original architecture.

Intervention was focused on careful retention of the existing original elements and restoration of the missing ones, while the building itself was repaired and updated to current technical standards. Unfortunately, most of the patina was taken away during the façade cleaning (Duchesne, 1999).

Specialist artisans, familiar with techniques dating from the time of original construction carried out the restoration of the damaged and missing original features. Their most significant intervention was restoration of the

Fig. 92. Condos AppLoft Top – Photo prior the adaptation (*Les hôtels, les immeubles de bureau*, p. 79-81) Bottom – Photo after the completion of the adaptation (Photo 1999)

<sup>&</sup>lt;sup>198</sup> The original building, the former Merchants' Exchange, was built in 1866. The architects were George and John James Brown (*Les hôtels, les immeubles de bureau*, p. 81). The fourth floor had been added to the original 1866 structure around 1900 (*Les hotels*, p. 81). The adaptive-use project was completed in 1999. The address is 211, Saint Sacrement Street. The Project Condos AppLoft –First Phase is the Dominion Block project (see p. 124), undertaken by the same developer (Duchesne, 1999).



original monumental interior staircase, including the addition of another flight, and the replacement of old windows. Damaged or missing cast iron elements on staircase and exterior balcony handrails have also been repaired or replaced by new ones recreated from existing examples and cast in a traditional manner.

The financing of 70 new windows was supported by a joint subsidy from the City of Montreal and the Ministry of Cultural Affairs (Duchesne, 1999). The authentic replicas of the building's original windows have replaced the heavily decayed existing windows. Although executed in the traditional manner and repeating the original aesthetic, they are in accord with contemporary technical standards.

Floor-to-ceiling heights and openings are in keeping with the original design different on each floor (3.6-5.6 m); the apartments on each floor (4 on each floor—16 altogether) thus have a different atmosphere. Apartments on the fourth floor have access to semi-private terraces. Their sizes vary from  $80-177m^2$ . New residents, according to their preference, had the option of preserving the original interior features, such as original woodwork (Duchesne, 1999).

#### Fig. 93. Condos AppLoft

Top – View of the third floor interior during the adaptation (Photo Trottier, Armand, Duchesne, 1999) Middle left – The original staircase was repaired and another flight was added (Photo Trottier, Armand, Duchesne, 1999) Middle right – The original entrance door and central balcony balustrade were some of the restored elements (Photo Trottier, Armand, Duchesne, 1999)

**Bottom two** – Details of the new windows (Photo 1999)

## 3.1. General Views

While there is still a need for practical improvement and refinement of the principles, especially in the treatment of buildings less architecturally valued and outside the main focus of preservationists, there is evidence of significant progress in the field of architectural preservation over the last four decades. Of particular importance is the formation of preservation criteria and control systems, established both through international organizations and various government levels, which currently make it unlikely for significant destruction of historical architecture to occur.

However, although established preservationist control systems have undeniably helped to prevent major heritage destruction by arresting careless or incompetent adaptive use interventions, it is possible that strict control could have the negative effect of either discouraging or insufficiently encouraging designers' full creativity. While Canadian practice may offer less flamboyant solutions than European practice, it has a much more flexible approach than that of the United States—which depends on a quite strict set of standards. Nevertheless, although the North American reliance on guidelines gives the impression of limited freedom with respect to new additions, it, is still possible to adopt a variety of preservationist approaches and methods that are either chosen as single key project strategies or, more often, combined with other methods in order to deal with specific situations created by particular architectural and heritage issues.

The nonselective protection of all changes occurring in a building's life, on the pretext of historical exactness, may have been appropriate in certain evolutionary phases of heritage preservation aimed at halting heritage deterioration and improper architectural interventions. Today, however, the strict implementation of preservationist tenets does not satisfy increasingly complex practice requirements. Past mistakes and significant experience enable designers to handle preservation problems with greater confidence and freedom than is afforded by doctrinal adherence to preservation documents. Considerably developed contemporary architectural and preservationist theory and practice, coupled with access to building records and modern technologies, permit one to recognize and effectively recapture the essence of the original architecture. But, as always, the ultimate factor that distinguishes the mere satisfaction of preservationist requirements from a true contribution to both old and new architecture lies in the individual designer's effort and ingenuity—none of which is expressible through any tenet.

Although adaptive use is currently a very frequent form of architectural preservation, it commonly involves the introduction of a new architecture and, to differing degrees, tampers with original architecture—a situation that existing preservationist tenets have still great difficulties to cope with.

While the current amalgamation of old and new architecture may be partially explained by the revolutionary expansion of adaptive use, the key issue still seems to be settling the half-century battle between waning modernism, with its preoccupation with newness and originality, and the resuscitation of traditional building strategies based on a compromise between progress and tradition.

The demolitionist approach, valid until only recently, needs not be answered with the opposite extreme—protecting the status quo as the only aim. Maintaining existing built context in museum-like fashion may have been the ideal of SPAB and Ruskin's followers but it does not correspond to the present reality of a much more complex and denser living environment. That diverse preservationist approaches have survived to this day is, however, proof that a compromise of sorts has to be found between the perpetuation of the status quo, expressing the subconscious need for stability and balance, and new architecture, reflecting society's impulse towards growth and change. Maximum effort towards the preservation of original architecture and its heritage qualities—yes, but ideally not at the expense of creative new contributions to our living environment, which should be flexible and adaptable to people's needs.

The main issue appears to be the sympathetic juxtaposition of new architecture with the old, or its correct placement in a relation to the present. One design aspect, however, seems to deserve special emphasis. It is habitually forgotten that new architecture, including its interpolation into historic contexts, is supposed to make an original contribution to the present, in the same way that old buildings reflected their own time. Often, a new design is partially or completely subdued within the existing architecture; or there are insufficient original elements, as if admitting to an assumed inferiority of contemporary design or that the effort is unnecessary or *démodé*. Perhaps it is time to admit that this attitude accurately reflects the current reality. The absence of a strong design concept is in accord with the negation of originality first introduced by post-modernism and additionally intensified by the domination of contemporary computerised culture, which in its technological triumph questions and discards even the universal principles of traditional reasoning.

#### 3.2. Montreal Experience

Preservationist campaign was initiated in the 1960s by enthusiasts who, following a worldwide trend and gradually joined by the general public and professionals from other related professions, brought the issue of urban environment protection to the forefront of public attention. This imparted a genuine public concern and objectives to architectural preservation, which was conducive to the acknowledgment of heritage as an important part of local urban culture.

The preservationist movement and adaptive use initially constituted an intuitive response to the negative repercussions of new development. Gradually, after accruing experience and after the significant

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development of the preservation conscience in Montreal, especially over the last two decades, the preservationist practice became more structured, as examination of selected adaptive-use projects quite clearly reveals.

While much wider design strategy variations are notable in the early phases, the majority of recent projects are undertaken correctly and cautiously. Pre-established methods are chosen to satisfy the most elementary preservationist requirements necessary for approval. In short, their main focus remains market reality. In general, there is an effort to preserve as much of the original features as possible. There is little effort to invest in any creative contribution to the existing architecture or to leave one's own mark; with the exception of a few outstanding examples, only a relatively small number of projects have employed highly original or creative solutions.

The adaptive use strategy currently applied in Montreal may be reduced to the following scheme:

- building is cleaned and repaired;

- old fenestration is replaced by new custom-made windows;

- old services are replaced by new ones which agree with contemporary technical requirements;

- new elements necessary for the successful implementation of residential use are added, while existing interior partitions are gutted and a new interior layout is created using light wall panels.

Smaller scale new additions and elements, in most cases reduced to new windows and balconies, usually have a distinctively contemporary "industrial" look, originating from the current high-tech aesthetic intrinsic to modern materials and technology. This puts the accent on technology as a label for the present. While in essence such an approach is correct because it relates directly to current reality and does not confuse the viewer about the conception period, the problem is that design statements often end at that point without any effort towards developing an underlying idea.

In cases of more significant architectural interventions, involving the addition of floors to existing buildings or autonomous new buildings sharing sites with heritage architecture, the interpolation of the new into an historical contexts is done with varying degrees of success. Imitation, sometimes even to the point of copying the adjoining original architecture, is frequent. Such an approach is highly inappropriate from both a preservationist and an architectural standpoint.

On the other hand, positive examples of new insertions express conspicuously new ideas, articulated with a contemporary flavor but relating directly to the existing context, usually letting the new design draw partial inspiration from the historic architecture, reinterpreting its forms and aesthetic and employing familiar materials.

There are also examples of highly contrasting insertions and additions. Such interventions are always debatable with respect to criteria. They vary even on an international scale and thus are liable to

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be judged differently, depending on the standard applied. In such cases, the decisive factor should usually be the degree of preservation—the lesser the danger to the original architecture, the greater the success of the new interventions. No less important, however, is the quality of the new architecture. The greater its contribution, both in terms of the new individual design and the enhancement of the heritage architecture, the higher the overall success of the preservationist or adaptive-use undertakings.

A few more thoughts on the treatment of new architecture within Montreal's adaptive use projects. While a significant preservationist effort and the positive achievement of significantly reducing the number of, from the heritage protection point of view, inappropriate interventions are easily recognisable, the same cannot be said of new architectural design, which seems to be relegated to the background.

Two hypotheses on this issue can be raised. On the one hand it is possible that this is a result of the fact that new additions, instead of being accepted as an opportunity for original contemporary architectural expression and thus a contribution to architecture, are still considered an undesirable condition imposed by the new use requirements and an obstacle in ultimately achieving conservationist objectives.

On the other hand there is a strong sense that the dominant preservationist attitude, characterised by an ever-strengthening control system, through the creation of standards and the approval procedure for proposed interventions, seems to be overly concerned with the existing environment and oriented chiefly towards the past. Although it would be hard to imagine that such an attitude could reach the same degree of opposition to the new as modernism elicited against the old, judging by the current tendencies, one of the results may be the gradual intimidation of new architecture through the limitation of its independent voice by constraining its freedom of expression and the imposition of antiquated aesthetic and design values.

Nevertheless, we have seen examples of the meaningful insertion of new architecture and its appropriate juxtaposition with the old, both in cases of smaller scale additions and more significant ones. These examples managed to join and express in contemporary style both the buildings' new nature and their former spirit, while leaving the current architect's individual stamp recognizable. This has contributed handsomely to both new and existing architecture. The Le Corticelli project, and especially the Le Clos Saint-Bernard project, must be mentioned in this context.

The conservationist approach, characterised by opposition to changing the existing state—including the restoration of missing elements—is in general characteristic of Montreal's adaptive-use practice. Nevertheless, the number of old buildings has been altered or restored to various degrees. In most cases, the main accent is put on the restoration of particular facade features, but there are also cases where

character-defining interior features have been restored to their original state (e.g. interior staircases, furnishings and fittings). Special attention is paid to the preservation of sculptural work.

Even though restoration, whatever its justification, is still a controversial intervention, there are cases where it was the correct choice, as in the restoration of elements destroyed by fire at *Le Complexe Conventuel du Très-Saint-Sacrement*; it could also have been one of the options, in the case of *Le Monastère du Bon Pasteur* where, instead of the restoration of the original multiple light window sashes, the existing windows were refurbished.

On rare occasions, restoration is a dominant strategy, as in the positive example of the adaptiveuse project involving the former *Le Devoir* building, where the existing original architecture was mostly conserved; missing, damaged or subsequently altered original components were repaired or partially restored, using traditional techniques and original materials. The decisions were based on reliable historical sources.

Alteration to building interiors—with the exception of certain components such as the original structure, materials or important individual elements—have often gone much further than the unavoidable original space subdivision needed to introduce housing units. Diminishing the size of residential units, primarily aimed at maximising building occupancy, has had the negative tendency of damaging original spatial integrity and atmosphere.

In some cases the appropriateness of housing as a new use for particular building types is questionable. While minimal damage is inflicted on old schools, where the new layout usually adopts the former central corridor distribution (even the size of units is often similar to classroom sizes), the greatest destruction of the original interior space occurs whenever spaces like school gymnasiums, churches, and generally similar structures with large integral interior spaces, are converted into housing.

In such cases, negative effects are also inevitably shown on the facades. The introduction of new façade elements such as windows and balconies, already an issue in adaptive use practice by their being incompatible with the original non-residential character of the buildings', can in some cases be extremely damaging to their architectural integrity. For example, residential windows are inconsistent with the architecture of churches or school gymnasiums.

The primary objective should be finding the appropriate use that would be inoffensive to the original spatial attributes and complementary to the needs of new residents and their neighbourhoods. The real problem is economic. Large spaces, such as school gymnasiums, have the potential to significantly increase the number of residential units, and therefore may directly increase the opportunity for profit, making it difficult to sustain the preservation argument. However, there are positive examples where similar spaces have been preserved, the best one being the former *Monastère du Bon Pasteur* with its

chapel transformed into a concert hall.

The best and the worst of preservation can be found amongst the earliest projects. Some great preservationist projects base their adaptations on excellent sources of positive experience. Others challenge even fundamental preservationist principles, and illustrate that the pragmatic adaptive-use arguments of the 1970s and 1980s, based primarily on economic benefits, have shifted heritage concern to the background.

Over the years, individual projects have not always reflected improvement. It is possible to deduce two different tendencies in adaptive use in Montreal. First, although general practice has evolved significantly, some early projects (e.g. Le Cours le Royer) were so farseeing that they continue to serve as models of proper preservation. Their quality, even individually, has rarely been surpassed by more recent projects. On the other hand, the same cannot be said of other early projects—it would be hard today to find the same degree of heritage destruction and inappropriate additions, which were frequent in early projects.

Judging by the uniformity of the approach to recent projects, it can be said that, even though it seems a relatively clearly defined adaptive use methodology has been established in Montreal, it is hard to outline a single trajectory that clearly and simply demonstrates its evolution since the early 1980s. We may talk about changing architectural styles or the technology and materials employed. We may talk about the changes in preservationist policies and the indisputable evolution of preservationist culture, which inured contemporary projects to the speculations and uncertainties that had initially led to inconsistent results. But the practice is still governed by a myriad of diverse factors influencing each particular project, factors which are redirecting design decisions from an exclusively architectural domain to economic and political spheres of interests. While satisfactory and correct results in a preservationist control system, the most outstanding results contributing to the field—as project analysis has demonstrated—still depend on the amount of public attention and individual designers' abilities.

# 4. Appendix

Reflecting wider North American trends, the loft concept in Montreal has lately been undergoing unprecedented changes. The most current variations of the loft concept transcend the definition of adaptive use. The intention of this appendix is to present these local adaptive-use tendencies which emerged after the completion of the main thesis research in 2000 and which, due to their importance and relevance for the study, deserve to be included.

As a consequence of the constant evolution of residential adaptive-use, mostly through the gradual adoption of conventional housing characteristics, the loft concept has also been in a steady process of transformation. For a long period, hybrid adaptive-use schemes, envisioning units that kept the main architectural characteristics of the original buildings (an aspect drawn from the loft concept) while introducing some form of interior space division<sup>199</sup> seemed to represent the final stage of evolution of the loft concept.

However, the extraordinary profusion of adaptive projects in Montreal in the late 1990s and especially since 2000<sup>200</sup> has been characterised by new marketing schemes that draw their legitimacy from the loft concept. Some typical ones are *hard loft, soft loft* and *techno loft*. These marketing slogans would not be worth noting if some of them had not broadened the loft concept which is traditionally connected exclusively to building recycling. "Loft" has now expanded to include new construction as well. "Hard loft" and "soft loft" are variations on the "apartment-loft concept" theme. They still deal with adaptive use. "Techno loft" concerns newly constructed residential buildings—fitting within the emerging North American trend of producing loft-like residential units within newly-built structures.<sup>201</sup>

<sup>&</sup>lt;sup>199</sup> See case study *Dominion Block (Condos AppLoft)* and so-called "le concept appartement-loft" or "mi-appartement mi-loft" concept (p. 88).

<sup>&</sup>lt;sup>200</sup> According to the recent real estate reports, there has been a significant increase in construction of "lofts" during the last few years in Montreal: from 85 residential adaptive-use units built in 1996, the number exploded to a yearly average of 450-550 units per year in the period 1997-99: "La Société canadienne d'hypothèque et de logement (SCHL), l'entreprise de recherche Clayton Research et plusieurs promoteurs immobiliers sont formels : la tendance du logement recycle en loft n'a jamais été aussi forte à Montréal, comme dans tout le Canada d'ailleurs. La construction de lofts a quadruplé dans la métropole depuis cinq ans. Avant 1996, une moyenne de 85 logements par année étaient convertis à Montréal. Pour la période 1997-1999, la moyenne a explosée : entre 450 et 550 logements ont été recyclés annuellement. Et quatre unités sur cinq sont des lofts. Enfin, depuis 1996, plus de 80% des logements sont aménagés dans le Plateau Mont-Royal, le Vieux-Montréal et le sud-ouest de Montréal, selon l'étude menée par la SCHL et la ville de Montréal" (Lavigne, 2000a). Regarding Old Montreal only, these were the the estimates for 2000: "Il s'est construit 100 appartements par an dans le Vieux-Montreal depuis 1996 et ce rythme va s'intensifier à plus de 400 appartements dès l'an 2000. La poussée survient aux deux extrémités du Vieux-Montreal, en même temps" (Chartier, 2000). <sup>201</sup> "On ajoute qu'actuellement le mot "loft" est plus vendeur que "copropriété" ou "condo", et que les vieux édifices

industriels à réhabiliter commencent à se faire moins nombreux. Résultat? Des nouveaux vieux lofts, des copropriétés de style loft, des immeubles flambant neufs qui adoptent le style "bâtiments historiques rénovés" se mettent à pousser en Amérique du Nord [...] Après avoir visité environ 600 lofts dans le monde, le producteur et réalisateur de l'émission *Lofty Ideas* (diffusée sur le chaîne Home and Garden television) confirme que l'ère est aux faux lofts. "À Austin (Texas), un promoteur a même bâti les deux immeubles en reprenant l'allure et le style des anciens entrepôts new-yorkais et en garnissant l'extérieur d'ornements rétro, de gargouilles, etc. On pouvait détecter qu'ils étaient neufs, mais le promoteur a essayé de les faire paraître le plus vieux possible", explique Tim Alp, producteur de *Lofty Ideas*. Le phénomène du loft neuf dans un bâtiment faussement vieux se rencontre aussi au Canada. À Ottawa, le promoteur Domicile Developments, après avoir restauré de vieux immeubles, offrira des copropriétés aux allures des lofts (plafond haut, grande fenestration, cuisine, salon et la salle à manger sans cloisons) dans un



**Fig. 94. Les Quais de la Commune** Map of the area – Dark areas mark the first three phases. In the descending order: phase 2, phase 1 and phase 3 <a href="http://www.quai3.com">http://www.quai3.com</a>>.

## 4.1. Les Quais de la Commune<sup>202</sup>

The *Quai de la Commune* project, one of the most important Montreal housing projects undertaken in the last few years, employs as much as three of the aforementioned design terminologies. A total of five construction phases have been envisioned. Phase 1 (completed in 1998) and phase 2 (completed in 2000) (Fig. 94), to which the terms "hard loft" and "soft loft" respectively were attached, involved recycling two adjacent obsolete industrial structures (Fig. 95, 96 and 97). The phase 3 "techno lofts", still in the process of construction in the year 2002, comprise a newly built volume (Fig. 98).<sup>203</sup>



#### Fig. 95. Les Quais de la Commune

Left – South-east view to the complex depicting the still incomplete phase 2 conversion (volume on the left) and the adjacent phase 1 commercial structure (volume on the right) (Photo 1998). Phase 3 is not yet built. Right – Des Soeurs Grises Street (north-west view): phase 1 (rear plan volume) and phase 2 (front plan volume) (Photo 1998)

bâtiment neuf mais affichant un style des anées trente. "C'est ce qu'il y a de plus hip en matière d'habitat urbain (latest twist on urban living)" déclare le promoteur" (Lavigne, 2000a). <sup>202</sup> The architectural firm *Le Groupe Cardinal Hardy* executed the design of the Quai de la Commune project (Picard,

2001). The project is located in the area bordered by Wellington, King, de la Commune and des Sœurs-Grises Streets, in the vicinity of the historical district of Old-Montreal. It was developed in partnership with the Groupe Alliance, itself formed by I&S and Prével. The first two phases of the project created 77 and 80 adaptive-use dwellings respectively, while the newly built third phase volume is divided into two parts, connected by a common lobby, of about 40 housing units each. Two additional phases, fourth and fifth, will be undertaken over the coming years, in which "lofts", as well as townhouses are being planned. In 1998, the Ouai de la Commune was awarded the Domus prize for residential project of the vear <a>http://www.sdmtl.org/english/develop/quaidelacommune/index.htm>. On Quai de la Commune Lofts projects see also:</a> Marsolais (1996a, 1996b, 2000a, 2000b) and Alarie (1999).

<sup>203</sup> "Dans le Vieux-Montréal, le promoteur Alliance est en train d'ériger la troisième tranche du projet de développement Quai de la Commune, rue de la Commune. Les copropriétés de ce nouvel immeuble auront des structures que ressembleront à celles des vrais lofts, comme des sections murales sur rail industriel et des gicleurs apparents" (Lavigne, 2000a).

## Appendix

The phase 1 "hard lofts"<sup>204</sup> have lower comfort levels than the phase 2 "soft lofts"<sup>205</sup>, which are well equipped and comfortable in the conventional sense.

While the interior concrete structure of the first phase building was left mainly visible, the interiors of the second phase "soft lofts" have been completely redone in accordance with standard residential requirements—having a negative consequence of almost entirely effacing the original atmosphere. In order to satisfy fire protection requirements, the originally visible wooden structure was covered with gyprock panels, creating new flat ceiling surfaces. The only original interior elements that remained visible are the steel columns and the old pipes. The so-called "soft loft" concept is not exclusive to *Quai de la Commune* phase 2. It has also been linked to the recently completed Fur district's *Lofts St-James* project,<sup>206</sup> which offers maximum residential comfort.

The most interesting, however, are the phase 3 "techno lofts". These are in a new building with exterior and interior features derived from historic architecture, and are equipped with the latest hi-tech fixtures.<sup>207</sup> In a manner reminiscent of Old Montreal commercial buildings, large aluminium windows dominate its façade and the exterior cladding is done in architectural blocks and clay bricks. In its 3 meter high interiors, emphasis is given to the concrete structure—especially its round columns—which is covered with sealant and left visible. Gyprock panels are used for the remaining surfaces. In a manner typical of original lofts, round galvanised heating and air-conditioning ducts are also left exposed.

<sup>&</sup>lt;sup>204</sup> "La structure de l'immeuble abritant la première phase du Quai de la Commune était tout en béton et se prêtait davantage au style "hard loft" où les colonnes, les plafonds et même les planchers peuvent être maintenus en béton apparent" (Perrier, 2000). The adjective *hard* addresses simple and unsophisticated aspects, intrinsic to original artists' lofts.

<sup>&</sup>lt;sup>205</sup> "L'immeuble de la deuxième phase est plus ancien. Comme les poutres des plafonds devaient être mieux protégées contre le feu par des panneaux de placoplâtre, la nouvelle version est plus « soft loft » avec des planchers de bois dur et des plafonds lisses [...] Pour conserver l'aspect loft industriel et une bonne hauteur de plafond, les concepteurs ont laissé apparentes les colonnes d'acier, ainsi que la tuyauterie des gicleurs. Cette heureuse initiative empêche que l'architecture intérieure se confondre avec celle de copropriétés neuves" (Perrier, 2000).

Also on "soft lofts": "Aujourd'hui, les lofts à l'image de celui d'Andy Warhol et dits *hard lofts* se font de plus en plus rares. Les soft lofts sont beaucoup plus luxueux, modernes et onéreux. La nouvelle génération loft préfère le confort aux planchers de béton (bruyants), aux fenêtres mal isolées, à la tuyauterie apparente qui fait glouglou après chaque chasse d'eau et aux murs décrépis d'usines abandonnées" (Lavigne, 2000a).

<sup>&</sup>lt;sup>206</sup> "Le soft loft, c'est le confort absolu. On a travaillé à l'insonorisation et à l'insolation malgré la grande fenestration, on a soigné les détails ainsi que la possibilité d'aménager plus ou moins de cloisons selon les besoins de l'acheteur" (Alarie, 2001). On *Lofts St-James* adaptive-use project, involving the 1928 Art Deco industrial buildings located at the corner between St. Catherine and St. Alexander Streets, see also Richer (2001).
<sup>207</sup> "Un nouveau type d'immeuble résidentiel vient de faire son apparition dans le monde immobilier montréalais : le

<sup>&</sup>lt;sup>207</sup> "Un nouveau type d'immeuble résidentiel vient de faire son apparition dans le monde immobilier montréalais : le techno résidentiel ou le loft techno qui prolonge en quelque sorte la vocation première de la Cité du multimédia [...] En effet, le Groupe Immobilier Alliance a dévoilé hier la troisième phase du projet de développement résidentiel Quai de la Commune, rue de la Commune entre la rue des Sœurs-Grises et la rue King [...] Les 80 lofts technos dont la superficie variera de 980 à 2000 pieds carrés se vendront entre 175 00 \$ et 500 00 \$. Ils offriront les caractéristiques suivantes : ils comprendront des sections murales sur rail industriel pour créer des séparations avec les chambres ou l'espace de bureau, ils seront dotés d'une fenestration impressionnante, du plafond au plancher et de mur à mur; chaque loft sera branché à une connexion haute vitesse Internet et à un service Intranet maison (moyennant un déboursé de 30 \$ par mois); et enfin l'immeuble sera chauffé par la vapeur produite par la centrale de la Corporation de chauffage urbain de Montréal, une filiale de Gaz Métropolitain" (Marsolais, 2000b).

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**Fig. 96. Les Quais de la Commune—Phase 1 ("hard lofts")** Left – The former commercial structure after the adaptation. Photo 1998. The intervention included complete fenestration replacement and introduction of small balconies.

**Right** – Interior views: before the conversion (top left) and after the completion (top right and bottom). The concrete structure was left visible <http://www.quai3.com>

## Fig. 97. Les Quais de la Commune—Phase 2 ("soft lofts")

Left – Former commercial structure during the adaptation. Photo 1998. New windows have been introduced. Right – Interior views: before <a href="http://www.quai3.com">http://www.quai3.com</a> and after the completion

<a href="http://www.canoe.qc.ca/maisondeco/im1100\_p93a\_0220-can.html">http://www.canoe.qc.ca/maisondeco/im1100\_p93a\_0220-can.html</a>. Note the significant alteration of the original interior. The pipes are the only original features that were left visible





# Fig. 98. Les Quais de la Commune—Phase 3 ("techno lofts") <a href="http://www.quai3.com">http://www.quai3.com</a>

**Top** – South-east view to the entirely newly built structure (almost completed in 2002). Notable is the resemblance with the old commercial buildings, especially considering its proportions and large fenestrated surfaces

**Bellow** – Two interior views: typical unit (left) and top floor penthouse unit. Notable are the concrete structure and piping that were left visible and large fenestrated surfaces

**Bottom** – Two typical units' plans (in some cases, as in the example on the left, the bedrooms are separated from the living spaces by the "barn style" sliding doors)

**Right** – Top floor plan of the (penthouses). The building is divided in two parts by the common central lobby volume

#### Appendix

These presented projects illustrate a further transformation of the loft concept, both within the framework of adaptive use and new construction, as well as the efforts to justify such tendencies in the current projects' promotion strategies. Within adaptive use, emphasis has been put on the evolution from so-called "hard lofts" to "soft lofts". As for new construction, the design intention to recreate lofts within newly constructed buildings is best evinced in "techno lofts." Due to the manner in which this is being done, the loft essence, already practically reduced to only its main physical components by modern adaptive-use practice, has been even further diluted.

The problem with this latest housing market trend does not seem to be the adaptation of the loft concept for new construction. On the contrary, new construction should be encouraged to benefit from the lessons learned by the evolving adaptive-use field. The real problem seems to be the confusion created by equating units in newly built structures with lofts by both directly naming them lofts and too literarlly copying loft design. By associating lofts with newly constructed buildings, the concept has moved away from the preservationist field, its true domain, and depleted of its historicity—there is not even a trace of the lofts' original historical and social components—stripping the term of its essential meaning and deflecting attention from its real potential.

Due to the fact that this complex problem involves all the shortcomings of the adaptive-use field and the intricacies of changing housing-market strategies, it would be unrealistic to attempt a quick and global solution. More modest initial objectives should be therefore established. Although it seems logical to start by directly addressing some of the adaptive-use design issues, an even better strategy would be to focus firstly on the source of the problem—the inappropriate phrasing chosen by some developers, journalists, and even architects when presenting or discussing housing projects. This is creating a misleading loft narrative and legitimizing inappropriate design strategies.

It is difficult to find cases where the loft notion is addressed in a remotely correct manner. On the one hand the term loft and loft terminology in general, whether in the case of adapted or newly constructed buildings, is for a variety of reasons being too literally applied. As an illustration, the *Quais de la Commune* project uses commercially motivated slogans such as "hard loft", "soft loft" and "techno loft", and the expression "les nouveaux lofts" is applied several times to the Phase 3 building in an overly casual manner: "Les nouveaux lofts seront aménages dans un nouvel immeuble de neuf étages"<sup>208</sup> (Marsolais, 2000b).

On the other hand, there are examples of more positive attitudes. Some architects and journalists are taking a more objective perspective by emphasizing that the design of a given housing projects is only

<sup>&</sup>lt;sup>208</sup> Similar examples include: "Édifice de lofts entièrement neuf" and its same source English translation: "Brand new lofts" <a href="http://www.quai3.com/commun/pageS4F.html">http://www.quai3.com/commun/pageS4F.html</a>). Also: "Avant-garde lofts ranging in size from 900 to 2000 square feet [...] The corridor and hallways will be attractively designed to reflect the special character of this generation of lofts [...]" <a href="http://www.quai3.com/explorer/entour5e.htm">http://www.quai3.com/explorer/entour5e.htm</a>).

*Appendix* 

based on or inspired by the loft concept. As an example of an appropriate terminology that could serve as a model when dealing with "loft-like" residential units, within both recycled and newly constructed buildings, take the comment on the *Lofts Victoria* project (the recent adaptation of the former Old Montreal shoe factory). The journalist employs the expression 'appartements en copropriété sous forme de lofts' [the condominium apartments in form of lofts]: "Afin d'y aménager 26 nouveaux appartements en coproprieté sous forme de lofts, les promoteurs des Lofts Victoria, Jean Campeau et Pierre Varadi, devront ajouter une rallonge à la droite du vieux bâtiment de briques rouges" (Hébert, 1999).

The search for proper ways in which new construction can benefit from the application of the loft concept should be encouraged. However, due to its historic and social dimensions, the name should stay in domain of adaptive use—it is even questionable if the term "loft" should be directly applied to any of the adaptive-use units, and therefore real efforts towards its recuperation have to be done within the adaptive-use field.

We should however be careful when pursuing still persisting "purist" stereotypes, painting lofts as a niche housing type exclusive to converted inner city industrial buildings and the idealised sphere of the artistic lifestyle. While this image may have corresponded to the initial loft-conversions, it reflects neither the current nor adaptive-use reality of the few past decades, and ultimately should not be confused with the real loft essence. As this study has shown, contemporary adaptive use has evolved significantly since the initial loft conversion phase in the 1960s. It is now not exclusive to any particular building type, area, social level, or design methodology

Taking all this in consideration, it is evident that in order to meet the challenge of the constantly changing adaptive-use field—whose borders with new construction are being increasingly blurred—redefining the traditional perception of the loft concept becomes a crucial issue. It would be preferable to take into consideration more of its philosophical essence instead of focusing exclusively on its main physical aspects, as has generally been done in so far.

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## 6. CD-Rom (Images)

1. Part 1<sup>209</sup> 1.3. Chapter 3 1.3.1 Introduction Old St. Paul's Cathedral, London 1.3.2.1. England St. Alban's Cathedral [St. Mary's Church (G. G. Scott's 1840 restoration)] 1.3.2.2. France La Madeleine Church in Vézelay 1.4. Chapter 4 1.4.7.1. Europe Lingotto Factory Louvre 1.4.7.2.2. Canada La maison Del Vecchio La maison Denis-Viger La maison Du Calvet La maison Papineau 1.5. Chapter 5 1.5.2.1. New York Studio Apartment Houses Studio House of Richard M. Hunt (1858) The 1906 studio of Henry W. Ranger Hôtel des Artistes 1.5.2.2. Manhattan Loft Conversions Industrial buildings in Manhattan Partial view of a loft in Manhattan 1.5.3.1. Illegal Artist Loft Conversions Illegally converted industrial building 1.5.3.2. Developer-Undertaken Loft Conversions The Candy Factory Lofts 1.6. Chapter 6 1.6.2. Preservation in Montreal-1928-1960s-Today The Van Horne mansion 1.6.3. Adaptive use in Montreal Lachine Canal Industrial Heritage 2. Part 2 2.1 Industrial Buildings 2.1.2. Le Cours le Royer 2.1.3. Revitalization of the St. Pierre Street 2.1.3.1. Maison de Mère d'Youville 2.1.3.2. Le Cours St-Pierre 2.1.3.3. Les Cours de Callière 2.1.4. La Cour Notre-Dame 2.1.5. Habitat Place Royale 2.1.6. Dominion Block (AppLoft-1st phase) 2.1.7. Canadian Bag 2.1.8. Le Cours Charlevoix 2.1.9. Le Loft Corticelli 2.1.10. Les Résidences Solin Hall 2.1.11. Le Coloniale 2.1.12. Les Cours Le Coubertin 2.1.13. Sherwin-Williams Complex 2.1.13.1. Lofts Sherwin-William 2.1.13.2. Écolofts Argenson 2.1.13.3. Habitations Sherwill 2.1.14. L'Usine Mont-Royal

<sup>209</sup> Basic information (including the sources) for majority of the projects that do not appear in the thesis (marked by bullets) is given in the Word documents placed in the respective projects' file folders.

2.1.15. Les Cours d'Outremont [L'Édifice Grothe] [La Coopérative d'Habitation Le Peuplier] [La Coopérative l'Arte] [Le 1000 Amherst] [Le Marquette] [Le Parc Viger] [Loft et Jardins] [Lofts Du Havre] 2.2 Institutional Buildings 2.2.2. Le Complexe du Très-Saint-Sacrement 2.2.3. Les Jardins de l'Église 2.2.4. Le Monastère du Bon Pasteur 2.2.5. Le Mont-Saint-Louis 2.2.6. Le Manoir de Belmont 2.2.7. Le Pavillon Lomer-Gouin 2.2.8. Les Habitations De La Mennais 2.2.9. Les Habitations le Retour à l'École 2.2.10. L'Alternative de Verdun 2.2.11. Le Dolmen 2.2.12. Le Bourg Christopher-Colomb 2.2.13. D'Arcy McGee [Fover Portugais Santa Cruz] [Habitation François-Solano] [Habitation Hélène-Boulé] . [Habitations Andre-Laundreau] [La Coopérative Au pied de la Montagne] [La Coopérative Du Plateau] [La Coopérative Dudley] • [La Coopérative l'Académie des Saints-Anges] [La Coopérative Osmose] • [La Coopérative Parc Marquette] [La Coopérative Skanagowa] [La Coopérative Voisins-Voisines] [La Coopérative Wilfrid-Laurier] [La Cour Kensington] [La Maison de la Culture du Plateau Mont-Royal] [La Maison Saint-Dominique] 2.3. Other Building Types 2.3.1.1. Le Castel 2.3.1.2. Le Clos Saint-Bernard 2.3.2. Les Tours du Parc-Westmount 2.3.3. Les Cours Mont-Royal 2.3.4. Lofts Hogan 2.3.5. Henry-Julien 2.3.6. Bluestone Lofts 2.3.7. Project Condos AppLoft-Second Phase [Lofts Bordeaux] 3. Appendix 4.1. Les Quais de la Commune **Significant Recent Projects** [Avenue du port condos] [Entrepôt Frigorifique] [Espace Condo-Loft] [Le Caverhill] [Le Couvent Outremont] [Le Royer Saint Claude ('loft-like' new structure)] [Les Cours Rachel] [Les Eclusiers] [Les Lofts du Quartier Latin ('loft-like' new structure)] [Lofts 2091] [Lofts St-James] [McGill 100]

[Redpath] [Unity Building]