

Place Royale in Quebec City: preservation by morphological inaptitude

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Abstract

*Between two natural barriers, a cliff and a river, Place Royale is the founding site of Quebec City. Once central, the area became gradually more peripheral in the second half of the 19th century. Facing a gradual decline after 1945, Place Royale became, between 1957- 2002, a major historical restoration project intended to commemorate the city's French heritage. The celebration of French-speaking America's cradle led to several architectural interventions' strategies. This included the restoration of late 18th century houses by eliminating later additions, the renovation and repair of damaged components using traditional construction patterns and finally, the reconstruction of historical houses by demolishing 19th century constructions. **Why so many historic buildings had survived around Place Royale?** The analysis of the neighbourhood's evolution, as well as the architectural restorations, suggest a new paradigm for the preservation; the relative location at the urban scale, and the morphological characteristics, favoured restrained buildings' transformations. Place Royale's morphological structure reached a degree of urban development maturity by the 1820s. The internal fringe space location, the dimensions of the land plots, and the building architectural components hold back later transformations like joining properties and rebuilding larger structures, as observed in other parts of Quebec City historical centre. Place Royale maintained part of its built characteristics by morphological inaptitude. This hypothesis is compared with other sectors of the Quebec City historic centre. This is suggesting that effective heritage preservation until the 1950s was less as a critical choice than a result of morphological constraint exerted at the urban, architectural and construction levels. The organic nature of these components, their uniqueness, favoured a fossilization that contained transformations. This pattern challenges the evolution of the serial components so commons in the urban fabric and architecture of New World cities.*

Keyword: historic centre, space syntax, urban morphology, heritage preservation

1. Introduction

This paper focuses on the observations on the study of the historic district surrounding Place Royale, which has most likely been preserved overtime for its morphological characteristics. Place Royale is only a 1.5-hectare district located in the lower town of Quebec City, i.e in the historic district which covers 73.5 hectares.



Figure 1. In a circle with a radius of 200m, 400m, 600m and 800m, it is noticeable that in a 20-minute walk, the entire historic district can be crossed and that the buildings that concern Place Royale are within a radius of 2.5 minutes. Sources: Luiza Santos

Previous research on Place Royale discussed the architectural theories (Faure,1992) and the social expectations (Berthold,2012) implemented by the restoration project (1955-2002). Here, we suggest shifting the question to why so many historical buildings were still found in the 1950s, regardless of their declining maintenance. The focus on the architectural and morphological features and decisions intends understanding the constructive culture of the site and its transformation. Typo-Morphology raises the following question: what are the essential characteristics of the building and the urban ensemble of Place Royale? The research project is therefore to structure restoration objectives and guidelines congruent with the documented and understood built heritage.

2. Background

Most known today as a touristic district, Place Royale is the nucleus at the genesis of the urban fabric of Quebec City. Once central, the area gradually evolved following the harbour activities' developments. The buildings' frame and typologies were partially transformed as the years passed, but the square remained in the urban fabric (Larochelle, 2002). Usually, the process of transformation of the space normally presupposes the recrafting of the place's own identity (Silva and Coelho, 2013). In the case of Place Royale, its 1970s' restoration aimed to reveal the city's French heritage. This project occurred while Quebec City's lower town confronted a general economic and social decline after 1945 (Noppen,1998). Place Royale became, between 1957- 2002, a major historical restoration project intended to recraft its French colonial appearance (1608-1760), erasing constructions of the later period (Figure 2).



Figure 2. Those 3 images illustrate the changes that occurred as a result of both the restoration project of 1957 and natural morphological development (as the enlargement of the riverfront). Sources: BANQ and Lesoleil Journal

The master thesis explores the hypothesis that the preservation of Place Royale, the urban fabric and the built premises, was possible because so much was still in place by the 1950s, while other part of the historical centre had been rebuilt extensively during the 19th century, thus reflecting the impact of the British colonial rule. The preservation of the Place Royale precinct was more the result of morphological inaptitude rather than conscious conservation process until the mid 20th century. This hypothesis stem from the combined

information from the analysis of its vertical growth through time, the evolution of the shoreline, the transformation of the lots and finally, by the connectivity of the street network.

3. Methodology

When Place Royale was restored in the 20th century, the morphological approach was unknown in Canada. Thus, the conservation principles and criteria were based on a charter of value and an acknowledgement of the symbolic importance of the site, rather than the observed architectural and archaeological evidences. The typo-morphological reading process is used as a suggested tool in the systematization for a set of elementary principles (urban and architectural) that could help in future design processes (Leite & Justo, 2017).

The methodology of this study implied redrawing the historical cartography from the archives as a tool to follow the evolution of Quebec City lower town. It also implies generating space syntax cartography based on these historic plans of the key moments of the evolution of the historic district and its surroundings. This has produced quantitative results and data that can support some objective explanations regarding the discontinuity and segregation of Place Royale district within the lower town and the old Quebec City area.



Figure 3. All 4 components of analysis. 1. Topography, 2. Built form 3. Plot land 4. Street Network. Sources: Luiza Santos

The relationship between the river and the cliff, two great constraints that had a tremendous impact in the morphological development on the area, is one of the first key element studied in this research, both in a synchronic and diachronic way. Then, when taking the buildings individually, a second degree of analysis can be achieved by gathering the information regarding their variations of numbers of floors between 1879-1957-2021. This enabled to understand the limitation of vertical development and why the area became gradually internally peripheral in the expanding urban fabric of Quebec City.

Following this methodology, another information that the cartography can reveal is the changing in the parcel system. The fusions or subdivisions of properties are noticeable in the sector, especially regarding the harbour activities and the lack of planification of land use between 1878 and 1957. And in a last perspective

of analysis, space syntax cartography was used as way to validate the connectivity of the street network of the lower town, which is a great way to understand how and why the Place Royale sector has been an inner periphery in the urban tissue, since the growth of the upper town. Analysing the connection of the urban structure illustrates the lack of connections of Place Royale with the rest of the suburb, as the city and its waterfronts grows.

4. Results and Discussions

4.1. Urban transformation

The figure ground plants from 1608 to 2020, at 8 key moments, emphasize the spatial relationships between the architectural element and the urban context, in their evolution and transformation over time. The synthesis of the diachronic evolution of Quebec City lower town shoreline which highlights the infilling and consequently the distancing of the shoreline profile from the cliff (figure 4).



Figure 4. This map summarizes the evolution of Quebec City's lower town waterfront. Source: Luiza Santos

In 400 years, the cliff has pushed the development of the lower town towards the shoreline. The infilling transformed the riverfront following the harbour's needs, notably for commercial land use. The last three profiles (1878 | marron-1957 | cyan-2020 | red) outline the last stages of infilling, showing a more mature urban fabric. We discover that Place Royale's morphological structure reached a degree of urban development maturity by the 1820s. The grey buildings represent the urban fabric of Place Royale, and it is possible to see that settlement have not changed the plan drawn in 1756, four years before the end of the French colonial era.

4.2. Vertical Density Analysis

Furthermore, with the 3 figure ground plants from 1879, 1957 and 2020, the analysis of the neighbourhood's vertical evolution suggests a new paradigm for the preservation. With the same methodology, the 1957 insurance survey map confirmed the concentration of stone buildings around Place Royale, while other parts of the lower town were rebuilt mostly in brick, a material introduced by the British. The information regarding the vertical density variations through time, allows the geo-referencing of height evolution. This method

highlighted how the area evolved in the buildings' sizes, types, and construction materials. It confirmed the unusual preservation of Place Royale surrounding and revealed the recurrences or exceptions in their load-bearing types bound to two constructive cultures.

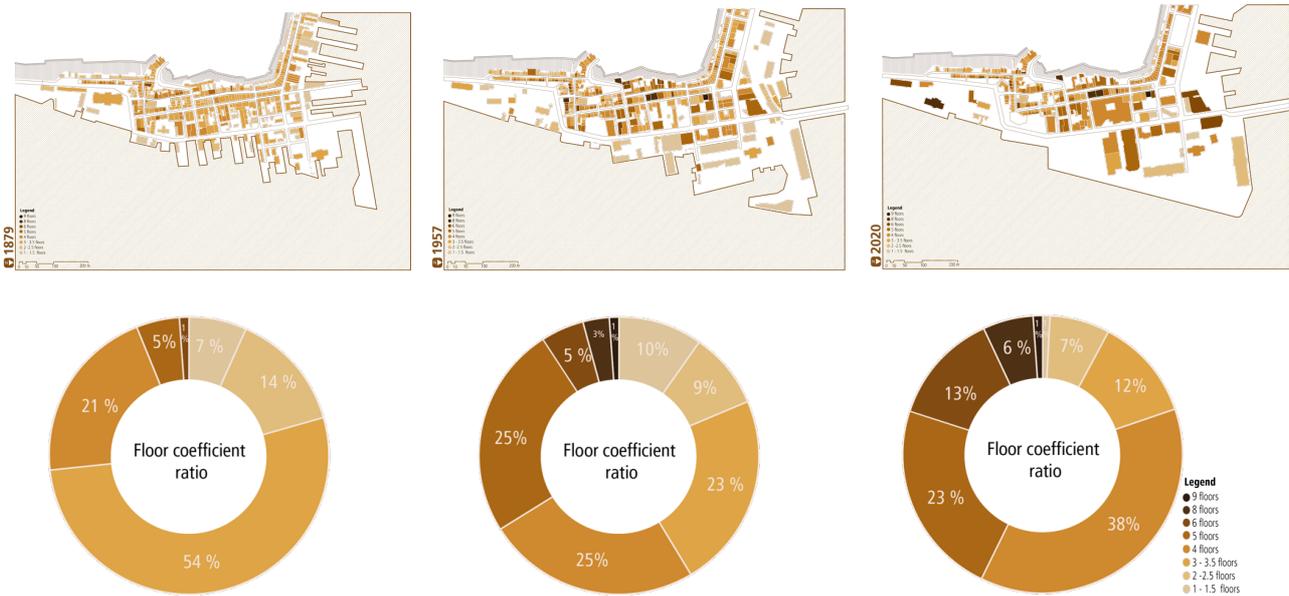


Figure 5. Vertical density evolution from 1879 to 2020 of the Lower town of Quebec City. Sources : Luiza Santos

The buildings' characteristics, according to the synchronic mappings, underlines that 3-3.5 storey structures dominated in 1879. By 1957, the map shows several 1-storey industrial warehouses around the port area and the constant between 3-4 and 5 storeys high buildings. Overall, most of the buildings have been raised between these two maps. The year 2020 in synchronous analysis shows the omnipresence of 3-storey buildings in the area, more than 50%. The number of buildings exceeding 6 storeys in height is very low. We can even see on an architectural scale that in Place Royale some buildings have had their number of floors lowered, to return to the French colonial dimensions of the 1756 map.

As a result of this analysis, many of the buildings in 1879 were 3 storeys high. In 1957, the whole sector was raised by one floor, making it uniformly 3-4-5 storeys. In 2020, most buildings are 4 storeys high, and again those in Place Royale have changed very little since 1879.

4.3. Plot land Analysis



Figure 6. Plot land Evolution from 1874 and 2020. Sources : Luiza Santos

The research compared the size and the relative location at the urban scale of the parcel system and the morphological characteristics of the buildings with the historic district within 2 hectares to its surrounding. This underlined how the plot sizes of Place Royale restrained the buildings' transformations. The plots were small and did not provided space for enlargement due to the tight road network.

The map from 1874, illustrates the land division. Plots planned to be built in the north of Place Royale, around the Saint-Pierre district, were deeper and better connected with three new Streets, forming a larger urban fabric.

By 2020, the current plot division reveals an overall enlargements of plots size. Overlaying the historical cartography, notably 1874 and 2020, reveals the sheer amount of merging lots. The procedure also affected Place Royale area, which underlined a fundamental contradiction in the restoration decision, by pretending returning the houses to the previous exterior dimensions and design, but by forcing their interval integration in one building, imposing extensive corridor space for connecting the apparently distinct structures.



Figure 7. Fusions and subdivisions of lots. Sources: Luiza Santos

Altogether, the analysis of the internal fringe space location, the dimensions of the land register, and the building architectural components refrained later transformations like joining properties and rebuilding larger structures. This can also be observed in other parts of Quebec City historical centre and is the subject of furthermore analysis of the research project.

4.4. Space Syntax

The space syntax analysis allows to validate the connectivity's of the urban mesh and thus also to make hypothesis and projections. Currently, some intervention analysis and hypotheses with space syntax are this

research, however for the purpose of this paper, with the two key mappings below illustrates how we can acknowledge that Place Royale remains an internal periphery within the Lower town.



Figure 8. *Space Syntax of road network form 1874 and 2020 in Quebec City lower town. Sources: Luiza Santos*

The axial map from the year 1874, when choosing connectivity shows St. Peter's Street as the main axis of connectivity, in the red line. The surrounding area is slightly less connected. Compared to 2020, where the changes in the road structure confirm the relative position of Place Royale in the urban fabric. It is an internal periphery. St. Peter's Street loses its dominance and Dalhousie Street has become the main axis of integration. Place Royale is today more segregated than ever from the rest of the urban tissue.

5. Conclusion

This paper used typo-morphological reading process as a method in the systematization of elementary urban and architectural principles (Leite & Justo, 2017). It allows a better understanding of the rules of composition and preservation regarding Place Royale, both before and after the restoration project.

The 1957 insurance map distinguishes the remaining old district sector by the concentration of stone buildings, whereas the rest of the Lower Town sector of Quebec City the map points out that the sector was largely rebuilt between 1879. The preservation of Quebec City founding nucleus cannot be explained by its historical antiquity, which was rediscovered in the 1920s (Côté, 2000). On the other hand, the morphological analysis offers four explanations: the topography, the vertical development capacity, the redevelopment potential of the plot and the relative position revealed by the space syntax analysis.

In the framework of the historic centres and its old town districts, where several layers of the past are superimposed in the urban fabric and the architectural composition, the typo-morphological method isolates variables for analysis and to draw up a review of the synchronic and diachronic stages. The process dissects the design decisions which inform designers.

It is in this sense, that we found that the preservation of a built heritage is the outcome of the limitation for redevelopment potential, framed by a set of variables. Thus, the evolution of Quebec City, its historical

centre, the Lower town in general and Place Royale precinct are affected by these factors, internal and external, notably the relative position.

The question is not insignificant in a New World context where transformations, densification, destruction, and redevelopment are at the heart of an economic and social project supported by morphology, as Anne Vernez-Moudon noted in her seminal study on San Francisco: "built for change".

The four morphological constraints encountered in Place Royale can be used as a starting point for reflection on the capacity of historic and modern urban environments to be preserved and changed, particularly in the context of New World cities. The organic nature of these components, their uniqueness, favoured a fossilization that contained transformations. This pattern challenges the evolution the serial components so commons in the urban fabric and architecture of colonial settlements. This is suggesting that heritage preservation is less as a critical choice than a result of morphological constraint exerted at the urban, architectural and construction levels.

References

1. Berthold, E. (2012) *Patrimoine, culture et mise en récit : l'île d'Orléans et la place Royale de Québec (1956-1978)* (Les Presses de l'Université Laval, Québec).
2. Castelli, M. (1975) 'L'habitation urbaine en Nouvelle-France', *Les Cahiers de droit*, 16(2), 403–430.
3. Caniggia, G. & Maffei (1979). 'Composition architecturale et typologie du bâti : Lecture du milieu bâti de base'. Venise : Marsilio Ed. (translataded by Pierre Larochelle, 2014).
4. Caniggia, G. (1983). 'Dialectique entre type et tissu dans les rapports préexistence-actualité, formation-transformation, synchronie-diachronie'. Italien translated by Christina Lamandi et Pierre Larochelle.
5. Cimon, J. (1991) *Promoteurs et patrimoine urbain*. (Éditions du Méridien, Montréal).
6. Côté, R. and musée de la Civilisation (2000) *Place-Royale : quatre siècles d'histoire*. (Musée de la Civilisation, Québec).
7. Dias Coelho & Cia (2016) *Os Elementos Urbanos* (Cadernos de Morfologia Urbana. Estudos da cidade Portuguesa, Portugal).
8. Dufaux, F. and Klein, A. (2018) *Place Royale : cinquante ans de patrimoine vivant 1967-2017* (Université Laval, Québec).
9. Faure, I. (1992) 'La reconstruction de Place-Royale à Québec', *Cahiers de géographie du Québec*, 36(98), 321.
10. Leite, J. S., & Justo, R. (2017). 'Typo-morphology: From research to architectural education'. *Architectural Research Addressing Societal Challenges*, 1175-1182. <https://doi.org/10.1201/9781315226255-180>.
11. Léonidoff, G.-P. (1996) *La construction à Place-Royale sous le Régime français* (Publications Québec, Québec).
12. Larochelle, P. & Commission des biens culturels du Québec. (2002) *Le contrôle des transformations du tissu urbain historique dans le secteur de la Place Royale* (Quebec)
13. Noppen, L. and Morisset, L. K. (1998) *Québec de roc et de pierres : la capitale en architecture*.(Sainte-Foy, Éditions Multimondes, Québec).
14. Muratori, S.(1946). 'Saggi di critica di metodo nello studio dell'architettura'. *Opera postuma a cura G. Mainucci*.(Centro Studi di Storia Urbanistica: Roma 1980). Traslated by Pierre Larochelle.
15. Vallières, A. (1999) 'Processus de transformation typologique du bâti résidentiel dans l'arrondissement historique du Vieux-Québec' (Mémoire (M. A.), Université Laval, Quebec).