

# The French Cartographer Jacques-Nicolas Bellin's Plans of 18th-century Urban Settlements in Present-Day Canada

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Volume 25, numéro 1, octobre 1996

URI : <https://id.erudit.org/iderudit/1016095ar>

DOI : <https://doi.org/10.7202/1016095ar>

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Éditeur(s)

Urban History Review / Revue d'histoire urbaine

ISSN

0703-0428 (imprimé)

1918-5138 (numérique)

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Citer cet article

Ferley, P. (1996). The French Cartographer Jacques-Nicolas Bellin's Plans of 18th-century Urban Settlements in Present-Day Canada. *Urban History Review / Revue d'histoire urbaine*, 25(1), 36–42. <https://doi.org/10.7202/1016095ar>

Résumé de l'article

La présente note de recherche porte sur les plans du XVIII<sup>e</sup> siècle de cinq établissements urbains situés dans ce qui constitue actuellement le Canada. Ces plans se trouvent dans l'atlas du XVIII<sup>e</sup> siècle, *Le Petit Atlas Maritime*, du cartographe français Jacques-Nicolas Bellin. Ils ne portent pas seulement sur les établissements français de Québec, Louisbourg et Montréal, mais aussi sur les établissements anglais de Halifax et St. John's. Cette note applique l'analyse de John W. Reps sur les traditions françaises et anglaises en matière de planification des villes du Nouveau Monde à des établissements canadiens. Les établissements français étaient influencés par la géographie et les décisions des fondateurs. L'établissement anglais de Halifax a été influencé par la tradition de planification structurée qui s'est dégagée des premiers établissements des colonies des basses terres côtières qui sont devenues depuis la Virginie et le Maryland. La géographie a exercé une influence plus déterminante sur le plan de St. John's, les rives du port définissant ce qui allait finir par devenir la principale artère de l'établissement.

# ***The French Cartographer Jacques-Nicolas Bellin's Plans of 18th-Century Urban Settlements in Present-Day Canada***

**Paul Ferley**

## **Abstract:**

***This research note examines the 18th century plans of five urban settlements located in present-day Canada. These plans were contained in the 18th century atlas, *Le Petit Atlas Maritime*, by the French cartographer Jacques-Nicolas Bellin. The plans were not only of the French settlements of Québec, Louisbourg and Montréal but also the English settlements of Halifax and St. John's. This note extends the analysis by John W. Reps of the French and English town planning traditions in the New World to exclusively Canadian settlements. The French settlements were influenced both by geography and by decisions taken by their original founders. The English settlement of Halifax was influenced by the formal planning tradition that emerged from the early settlements in the Tide-water colonies of present-day Virginia and Maryland. Geography had a more dominant impact on the plan of St. John's with the barbour shoreline defining what was eventually to become the main thoroughfare in the settlement.***

## **Résumé:**

***La présente note de recherche porte sur les plans du XVIII<sup>e</sup> siècle de cinq établissements urbains situés dans ce qui constitue actuellement le Canada. Ces plans se trouvent dans l'atlas du XVIII<sup>e</sup> siècle, *Le Petit Atlas Maritime*, du cartographe français Jacques-Nicolas Bellin. Ils ne portent pas seulement sur les établissements français de Québec, Louisbourg et Montréal, mais aussi sur les établissements anglais de Halifax et St. John's. Cette note applique l'analyse de John W. Reps sur les traditions françaises et anglaises en matière de planification des villes du Nouveau Monde à des établissements canadiens. Les établissements français étaient influencés par la géographie et les décisions des fondateurs. L'établissement anglais de Halifax a été influencé par la tradition de planification structurée qui s'est dégagée des premiers établissements des colonies des basses terres côtières qui sont devenues depuis la Virginie et le Maryland. La géographie a exercé une influence plus déterminante sur le plan de St. John's, les rives du port définissant ce qui allait finir par devenir la principale artère de l'établissement.***

In 1763, the French cartographer Jacques-Nicolas Bellin published his four volume *Le Petit Atlas Maritime*.<sup>1</sup> This atlas is of note because of the relatively detailed depiction of the principal coastal and urban areas in the known world at that time. The first volume of this publication, *L'Amérique Septentrionale et Les Isles Antilles*, contained plans of the key settlements within the present-day boundaries of Canada. Included were urban

plans of: Québec, Louisbourg, Montréal, Halifax and St. John's. These early plans provided an illustration of both the French and English town planning traditions in Canada. A comparison of these two town planning traditions in the New World has been well-documented by John W. Reps in his book *The Making of Urban America*.<sup>2</sup> In that publication, Reps used Québec, Montréal and Louisbourg as examples of early French town planning in the New World.<sup>3</sup> By discussing the plans of Halifax and St. John's, this article will attempt to extend the distinction between French and English planning traditions specifically to Canadian settlements.

## **The Cartographer**

Jacques-Nicolas Bellin was born in Paris in 1703 and died in Versailles in 1772. He was the chief cartographer of the *Dépôt des cartes, plans et journaux* of the French Ministère de la Marine. He published three main atlases of which *Le Petit Atlas Maritime* was the third. The other two were: *Neptune français* in 1753 and *Hydrographie français* in 1756. The former documented all of the coasts of France while the latter detailed all the known coasts in the globe. Thus the third atlas is of note because of its comprehensive depiction of urban areas.

Bellin also provided maps for a number of other publications including Pierre François-Xavier de Charlevoix's *Histoire et description générale de la Nouvelle-France* published in 1744 and Antoine François Prévost's *Histoire générale des Voyages* published between 1746 and 1770. (An abridged version of the latter by Jean-François La Harpe, which also contained maps attributed to Bellin, was published starting in 1780.)

As chief cartographer of the *Dépôt des cartes*, Bellin had immediate access to manuscript maps sent from New France by various explorers and military engineers. Plans detailing ongoing fortification of the key French settlements in North America provided a particularly rich source of information on urban settlements for Bellin. This advantage was not available to him for detailing the English settlements. The plans for these settlements were based more on public documents that appeared in various British publications.

## **The Maps**

The map of Québec (Figure 1) contained in the Bellin atlas is one of the most commonly reproduced maps of 18th century Québec. The original manuscript for this map is often attributed to the French military engineer Chaussegros de Léry and dated around 1720.<sup>4</sup> The plan of Québec by Bellin first appeared as an illustration in Charlevoix's 1744 publication. The plan also appeared in Prévost's later publication.

The 18th century plan of Québec best reflected a pattern common in pre-industrial European cities of a commercial lower town and a more institutional upper town. More specifically, the upper town provided land grants for ecclesiastical and administrative officials as well as for military facilities and personnel. This distinction is clearly evident in the Bellin map with the tightly packed commercial lower town clinging to the base of

the cliff while the more spacious upper town spreads out to the west.

The commercial aspect of Québec's development resulted in part from the settlement being the furthest navigable point for seagoing vessels into the interior of the continent. This allowed Québec to become a transfer point for furs being transported to the settlement on vessels able to navigate the interior waterways and onto ocean-going ships sailing for Europe. Québec also played a role distributing goods throughout Canada as vessels returning to Québec were loaded with European manufactured goods.

The administrative role for Québec was solidified in 1663 when it was named the capital of New France. With this designation the town became the principal residence for the Governor and Intendant of the colony. The governors residence was in the Fort or Chateau St. Louis and evolved into a focal point for the emerging street system in the upper town. The institutional functions which dominate the upper town plan, however, were not the administrative buildings but the ecclesiastical properties. For example, Notre-Dame church, the adjoining Seminary and the bishop's residence assumed a very prominent position in the upper town. As well, the Bellin map shows that large land grants were provided to a number of religious orders many of which established their Canadian headquarters in Québec (Les Recolets, Les Jesuites and Les Urselines).

The topography of Québec had initially secured for the town its military importance both because of its deep-sea port facilities and because it was located on a high promontory at a marked narrowing of the St. Lawrence River. With the establishment of Québec as the capital of Canada, its military importance was enhanced further. This necessitated the extensive fortifications for the town protecting the western flank of the town shown in the Bellin map. These fortifications had been built between 1693 and 1709 though, by the time of the publication of Bellin's map, they had been replaced and/or incorporated into a more extensive complex of structures that eventually surrounded the western and southern edges of the town.

Military considerations did not extend to specifying an orthogonal street system. To some extent the lower town did approximate such an arrangement though this likely resulted more from topographical considerations of building on the narrow strip of land between the cliffs and the river's edge. The upper town, which faced fewer geographical constraints, displays little attempt to adhere to any grid-like street system. The plan of the upper town seems to have evolved more by trying to accommodate the properties granted to the various administrative and ecclesiastical organizations in Canada's new capital. If any organizing principle was utilized, it was seemingly to focus principal streets on the Fort St. Louis and the passageway down to the lower town.<sup>5</sup>

Reps commented in his publication *The Making of Urban America* that town planning in the French colonies in the 17th and 18th century adhered to less rigorous guidelines relative to

Spanish settlements. The overall appearance of these French settlements seemed more determined by the proclivities of the original founders rather than strict edicts as contained in the Spanish "Laws of the Indies." This seems true of Québec particularly by an examination of the upper town which contributed to Reps speaking of this settlement as representative of a replica of a medieval town.

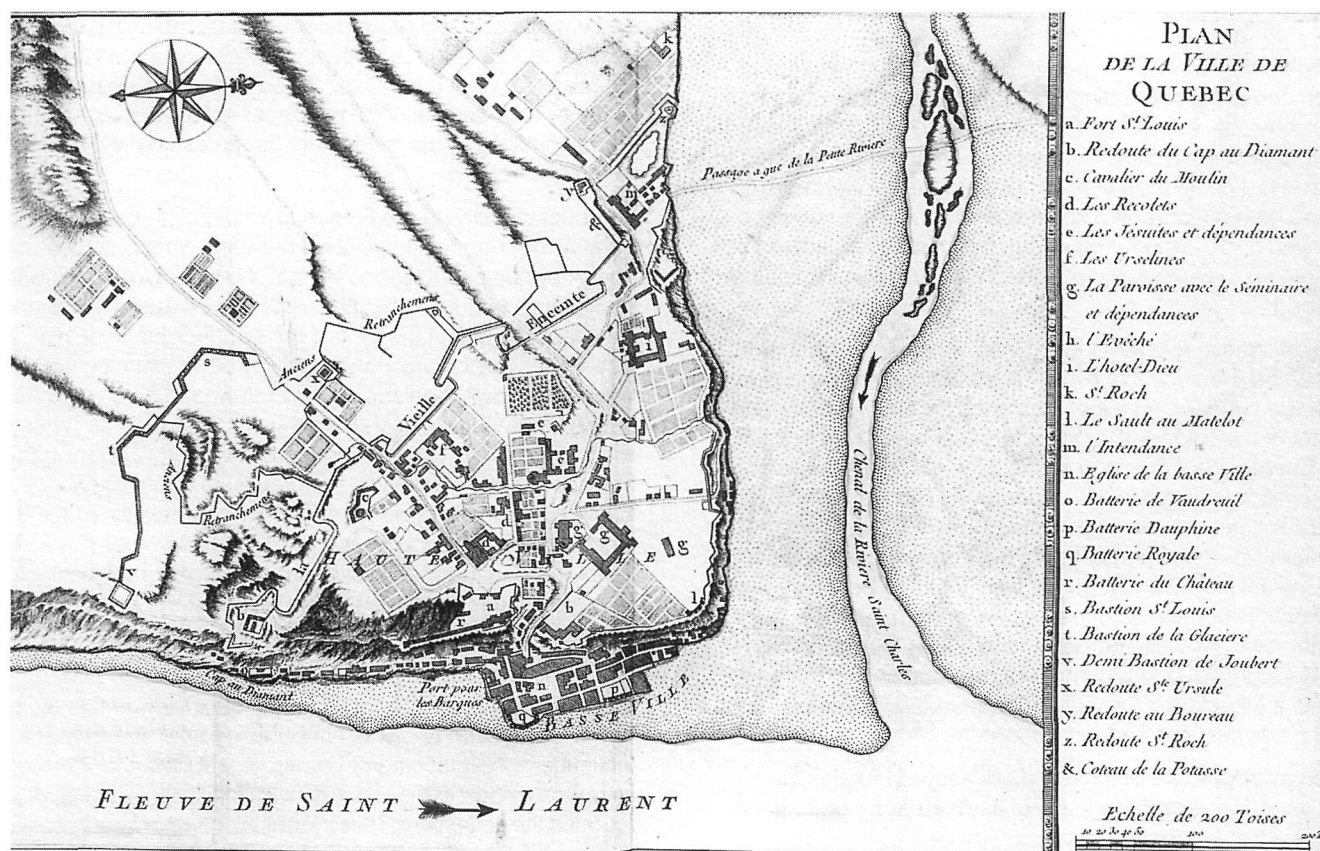
In further classifying the French town planning tradition in the New World, Reps distinguished between "linear" versus "non-linear" prototypes. Québec fell into the latter type along with Louisbourg (Figure 2). However, as can be seen by a quick perusal of its plan, Louisbourg is much more regular in its layout. While Québec was referred to by Reps as being typical of a medieval town, Louisbourg was referred to as being a Renaissance community. A key characteristic of the Renaissance prototype was a very regular configuration clearly evident in the Louisbourg plan. However, the peninsula upon which Louisbourg was located, along with marshy terrain to the southwest, forced an abandonment of the pure symmetry more typical of the Renaissance prototype. These geographical factors may also have contributed to the centre of the settlement, the place d'armes, being located on the periphery rather than in the centre as was more commonly the case for this prototype.

The Renaissance tradition was more clearly evident in the grid-iron street system and was attributable to the strong military influence in the planning of Louisbourg. Military considerations were also evident in the very extensive fortifications that surrounded the settlement. These fortifications were largely based on the planning principles of the French military engineer Sébastien Le Prestre de Vauban.

The plan shown in Bellin's atlas was likely based on an original 1745 manuscript by Étienne Verrier, fils. The elder Verrier was one of the key military engineers of Louisbourg responsible for many of the fortifications including various seaward fortifications and the lighthouse.

In spite of the dominance of military considerations in the settlement of Louisbourg, the importance of commercial activities to the settlement should not be minimized. Louisbourg benefited from its close proximity to the rich cod fishery of the Grand Banks. The importance of the fishery was enhanced with the moving of the French fishing fleets from Plaisance following the ceding of the southern coast of Newfoundland to the British under the terms of the Treaty of Utrecht in 1713. Cod was primarily exported to France in exchange for manufactured goods and foodstuffs. As well, there were sizeable exports of cod to the West Indies for molasses, sugar and rum. These latter products were in turn often exported to New England along with cod in exchange for foodstuffs and building supplies. The trade flows resulted in Louisbourg becoming a transshipment centre trading with both the Old and New World.

Louisbourg was designated the administrative centre for the colonies of Île Royale (Cape Breton) and Île St.-Jean (Prince Edward Island). In the administrative hierarchy of the French



**Figure 1: Plan of Québec.** Source: National Archives of Canada.

colonies in North America the governor of Île Royale was responsible to the governor general of New France in Québec.

Montréal (Figure 3) was characterized by Reps as representative of "linear" urban form of French town planning in the New World. This configuration was in large part a reflection of the site's geography. The settlement was bounded on the south-east by the St. Lawrence River and the northwest by the height of land, the Coteau Saint-Louis, which ran parallel to the river. In its earliest days trails emerged parallel to these geographical features. They were connected by numerous minor streets that ran perpendicular to these principal roads. The resulting orthogonal pattern was subsequently more formally aligned in 1672 by Dollier de Casson, superior of the Sulpicians and seigneur of Montréal. This provided Montréal with a more distinctive grid-iron street system in comparison to that which evolved in Québec.

The Bellin map of Montréal appears to be based on manuscripts from the period 1730 to 1752. In particular, it was likely

derived from numerous plans sent to the Dépôt des cartes by the French military engineer Chaussegros de Léry. De Léry was responsible for the fortifications for the settlement and provided regularly updated plans to the French court.

Bellin's map of L'Isle de Montréal was originally contained in Charlevoix's 1744 publication. However, this earlier map did not contain the insert of the plan of Montréal.

Though Montréal was originally founded in 1642 as a missionary, commercial concerns soon came to dominate the subsequent development of the settlement. In particular, Montréal in the 18th century came to become a main transshipment centre for furs sent from the interior of the continent. The rapids west of Montréal required that furs be transported to the settlement by canoe before being loaded onto small ships that were able to safely navigate the calmer waters that flowed to Québec.

Montréal was also a regional garrison and military warehouse for the western region of the Canadian colony. Military considerations were evident in the fortifications that surrounded the set-

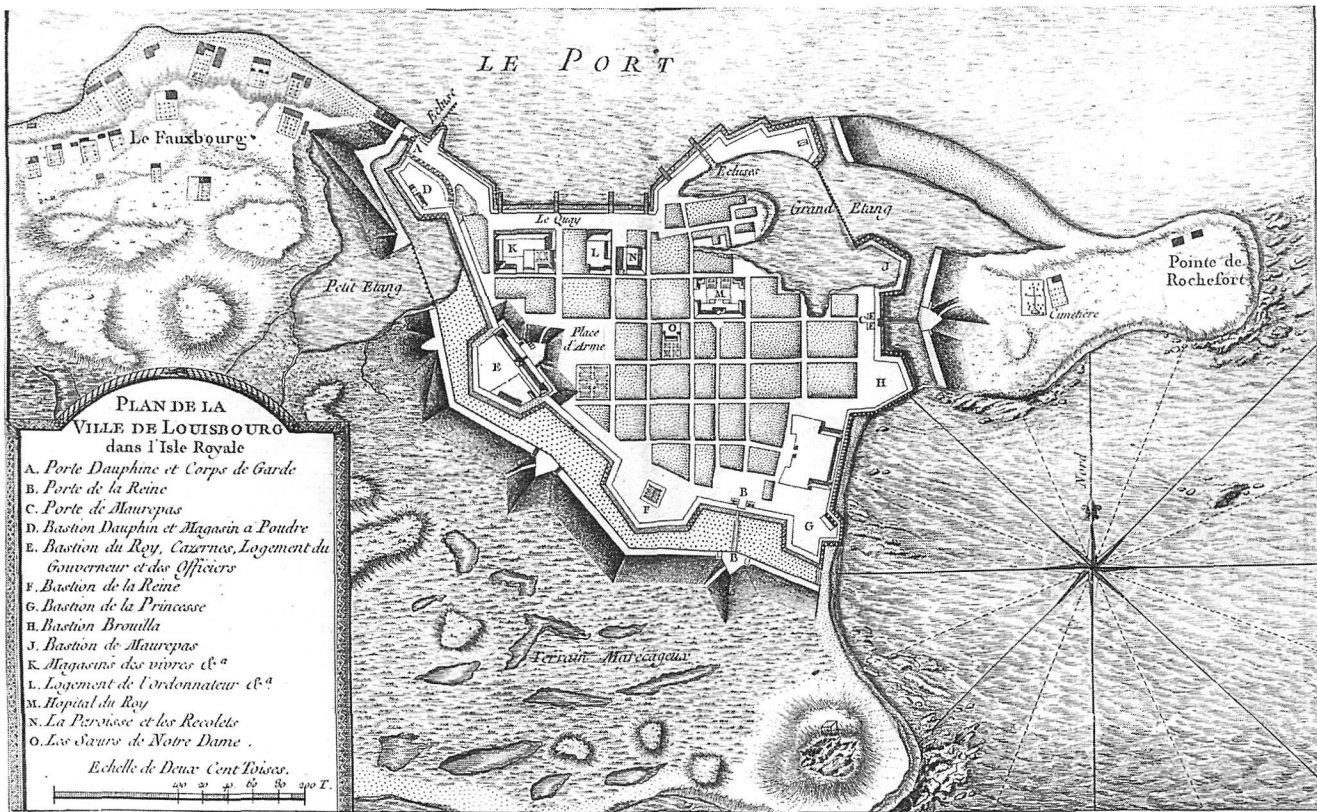


Figure 2: Plan of Louisbourg. Source: National Archives of Canada.

tlement. However, these defense works were relatively minimal compared to Québec or Louisbourg. As well, though not evident in the map, the quality and state of repair of Montréal's fortifications were often very poor.<sup>6</sup>

The urban plans of the two English settlements of Halifax and St. John's were not explicitly discussed in Reps' publication *The Making of Urban America*. There is, however, discussion of two English town planning traditions in the Tidewater and New England colonies. The early plans of Halifax and, to a lesser extent, St. John's indicate some similarities with these early English planning traditions.

Reps discusses at length the 16th and 17th century New Town Acts of the Tidewater colonies of present-day Virginia and Maryland. The motive of these Acts was both to facilitate colonization and to control the flow of trade to the mother country, England. These acts not only contained instructions as to the location of new towns but also as to their layout. Though Halifax (Figure 4) was not directly subject to these specifications, its original plan seemed to reflect many aspects of this tradition. This possibly reflected British authorities using their experience in these earlier Tidewater colonies to plan the original settlement of Halifax.

Generally the New Town Acts specified a very simple gridiron street system that was clearly reflected in the Halifax plan. Military considerations such as ease of defense were a motivating factor for this specification. The New Town Acts provided the instruction to locate settlements close to navigable rivers and waterways. However, beyond this specification, there was little acknowledgement of the waterfront. This is clearly evident in the plan for Halifax which is situated on the edge of a sheltered ocean harbour. However, the main square is located in the centre of the settlement far away from, and with no effort to distinguish the access street to, the water's edge.

One difference of note is with respect to the layout of the town square. In many of the Tidewater settlements, these squares are an unbuilt block within the grid pattern with entry to the square along one of the streets defining the square. This was a common feature of the medieval frontier settlements referred to as bastides.<sup>7</sup> In contrast, the main square in the Halifax plan employs a more Renaissance-like practise of streets coming into the square at the mid-point of its side. However, this is true on only two sides with four other streets still defining the four sides of the square.



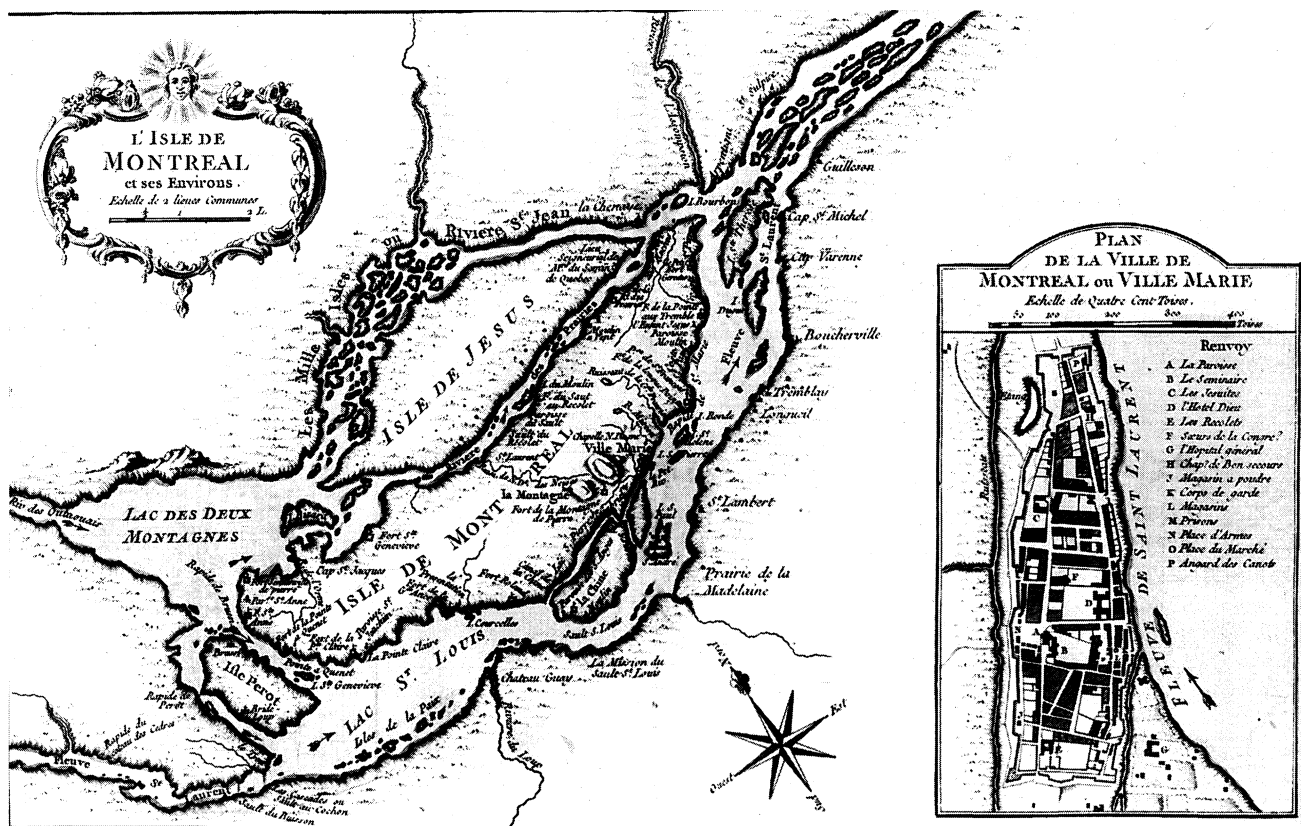


Figure 3: Plan of Montréal. Source: National Archives of Canada.

The map of Halifax by Bellin appears to be originally based on a map by Moses Harris, who was one of the 2,500 original settlers of this new British garrison. A published version of the Harris map appeared in the English publication *Gentlemen's Magazine* in October 1749 and represented more what was intended to be built rather than what was physically in place at the time.<sup>8</sup> However, a later, more factual, manuscript attributed to Vaudreuil in 1755, suggests that much of the original plan was realized. The five forts surrounding the settlement were eventually built as was the orthogonal street plan. One difference was the Vaudreuil manuscript suggested 12 streets versus the 10 indicated in the Harris map. As well, the Vaudreuil map suggests less symmetry in the surrounding palisade.<sup>9</sup>

Commercial activities were less evident in the Bellin map though later maps, such as by DesBarres in 1776–77, indicate a waterfront lined not only by expanding military installations but also commercial wharves.<sup>10</sup> Following the demise of French authority in Canada in 1763, Halifax assumed Louisbourg's earlier role as a transshipment centre. This entailed receiving products from the surrounding fishery and distributing imports, such as manufactured goods, throughout the British colony.<sup>11</sup>

Halifax was the seat of government of the colony of Nova Scotia. The Bellin map does in fact acknowledge this as it shows the proposed site of the Governor's House. However, it is the Court House and the principal church of the settlement that is given much more prominence in the map. The location of the Court House and the church, along with the eventual development of the wharves along the waterfront, contributed to the evolution of a more institutional upper town versus the commercial lower town similar to Québec.

St. John's (Figure 5) is one of the oldest settlements in the New World and predates the New England colonies. Thus the planning traditions of the latter were unlikely to have informed the original layout of St. John's. As well, the New England colonies of the 16th and 17th century were established by individuals bounded together by various factors such as religion or kinship. In contrast, St. John's was established primarily for commercial purposes as a summer camp for ships working the Grand Banks fishery. However, there still emerges some interesting similarities between St. John's and the so-called "linear" New England community as discussed by Reps.

## Bellin's Plan of 18th-Century Urban Settlements in Present-Day Canada

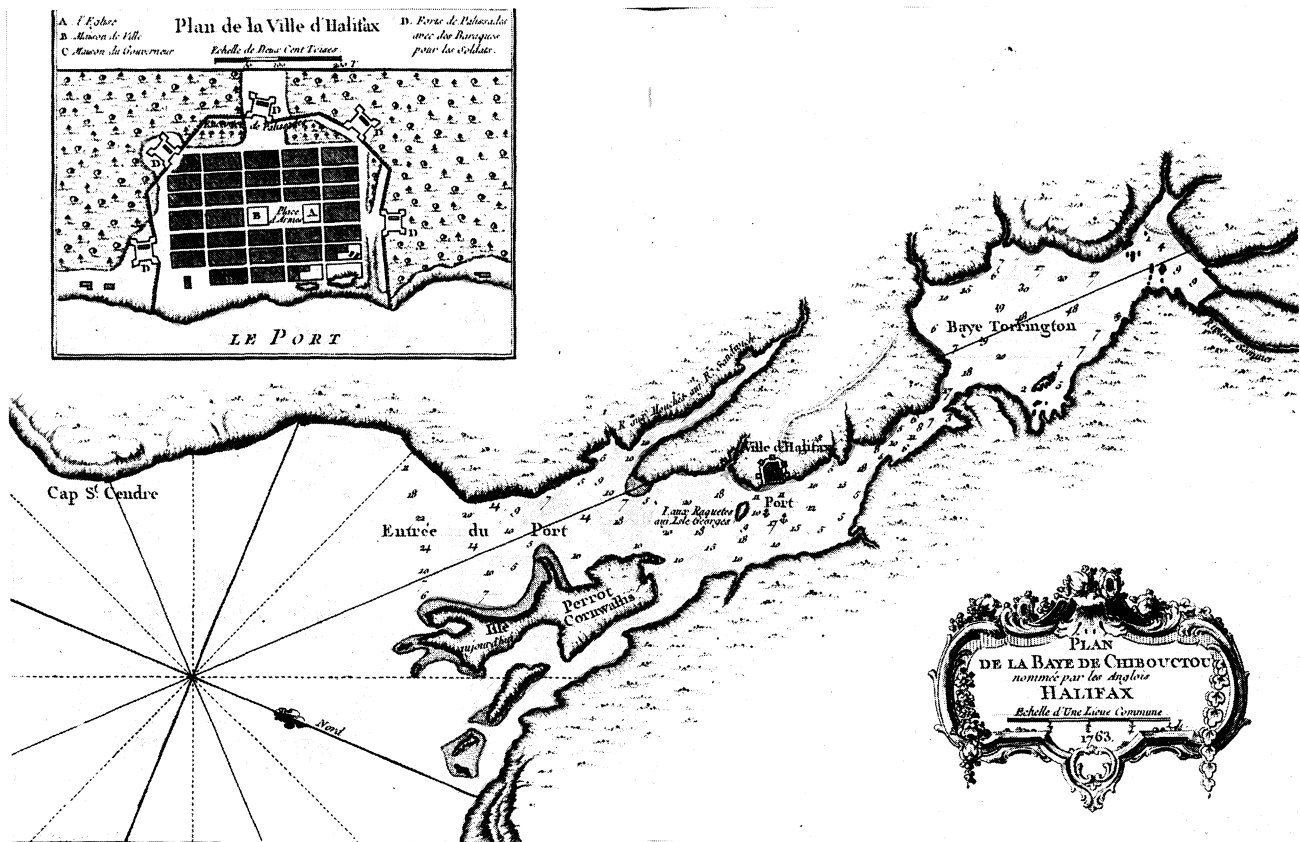


Figure 4: Plan of Halifax. Source: National Archives of Canada.

These linear New England communities are distinguished by a single street which form a spine through the settlement. In two examples cited by Reps, a waterfront determines this principal street. In Exeter, New Hampshire, Water Street generally follows the Exeter River while in Providence, Rhode Island, Towne Street follows the shore line. In St. John's, Water Street eventually evolved to follow the shoreline of the harbour though the plan depicted in the Bellin map predates any road system. However, the shoreline does very much define the urban form with dwellings and docks lining its edge as these structures interface between land and sea.

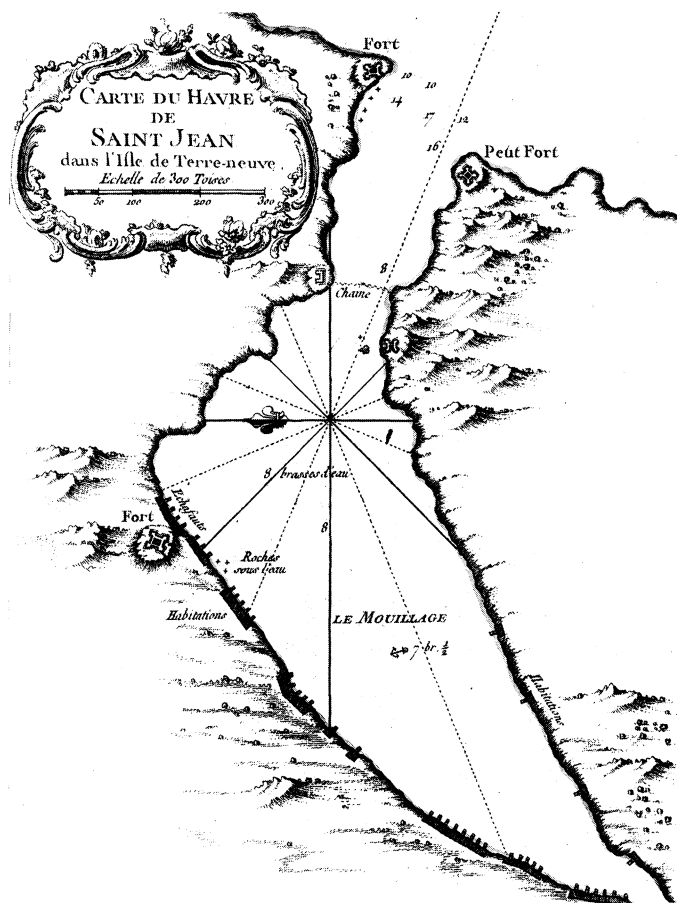
Commercial interests were of paramount importance in the establishment of the town of St. John's. However, it is difficult to appreciate this from the map of St. John's contained in the Bellin atlas. The map suggests a settlement composed of three forts and stylized fishing stages (referred to in the Bellin map as Echafauts) which line the water's edge. The source material for Bellin's map is not known for certain but appears to be of a vintage closer to 1700 than 1763. The image of St. John's portrayed by Bellin seems to fit a characterization provided of the

town late in the 17th century as being little more than a garrisoned fishing village.<sup>12</sup> St. John's was to become a major commercial fishing centre in New World by the end of the 18th century but little of this importance is apparent in Bellin's map.

### Conclusion

The Bellin atlas provides a valuable summary of 18th century urban settlements in present-day Canada. The cartographer's access to very detailed manuscripts sent by military engineers to France helped provide very accurate depictions of Québec, Montréal and Louisbourg. The plans for Halifax and St. John's were less detailed and more dated renderings as Bellin was more dependant on foreign published works for his source material.

The Bellin atlas illustrates the French and English new town planning traditions in present-day Canada. This provides the opportunity to extend the discussion of these planning traditions in the New World that was originally discussed by Reps in his publication *The Making of Urban America*. Though Reps analyzed the early French settlements in present-day Canada,



**Figure 5: Plan of St. John's. Source: National Archives of Canada.**

his examples for the early English town-planning traditions were all from settlements in the present-day United States.

The early plans of the French settlements of Québec, Montréal and Louisbourg generally reflected less rigorous design principles compared to settlements that emerged under the Spanish "Laws of the Indies." The French settlements seemed more informed both by geography and by decisions taken by their original founders. Geography likely contributed to the grid-iron street system of the lower town in Quebec though the upper town was seemingly more informed by the positioning of various land grants to provide a focus on the Fort St. Louis. Military considerations were clearly evident in the gridiron street system and heavy fortifications of Louisbourg. However, the irregular peninsula upon which the settlement was located plus the proximity to marshy terrain contributed to some compromise from

the more regular configuration of the Renaissance-tradition that it generally reflected. Geography contributed to the more "linear" layout of Montréal with the river and a height of land determining both the narrow strip of land on which to locate the original buildings and the trails that emerged to connect them. This original layout was more formerly specified by Dollier de Casson to provide greater order to the settlement.

With respect to the English-planning tradition, Halifax's very regular street system and its proximity to the water's edge suggest that it may have been informed by the traditions of the early English settlements in the New World in the Tidewater colonies of present-day Virginia and Maryland. However, the design of Halifax's town square indicate some evolution from this prototype. As was the case with the Tidewater colonies, Halifax showed little acknowledgement of the surrounding geography particularly with respect to the waterfront. In contrast, geography had more of an impact on the layout for St. John's. In this regard it provides an interesting similarity with a number of settlements in the New England colonies where the water's edge defined the principal thoroughfare through the urban area.

#### Notes

1. A five volume publication of the same title was issued in 1764. See R.V. Tooley, *The Mapping of America* (London: The Holland Press Limited, 1985), p. 208.
2. John W. Reps, *The Making of Urban America* (Princeton, New Jersey: Princeton University Press, 1965).
3. In fact, Reps used a Bellin map from *Le Petit Atlas Maritime* to illustrate the early town plan of Louisbourg. Reps' illustrations for Québec and Montréal were maps by the British cartographer Jefferys whose source material is widely thought to be the earlier produced Bellin maps contained in *Le Petit Atlas Maritime*.
4. Québec *The Fortified City: From the 17th to the 19th Century* by André Charboneau, Yvon Desloges, Marc LaFrance argues that the source manuscript is more properly dated around 1709 and reflects the work of the French military engineer Levasseur de Neré.
5. See Rémi Chénier, *Québec: A French Colonial Town in America, 1660 to 1690* (Ottawa: Minister of Supply and Services, 1991) p. 21.
6. See Jean-Claude Marsan, *Montreal in Evolution* (Montreal: McGill – Queen's University Press, 1974) p. 83.
7. Reps discusses the influence of bastides on the early settlements in the New World in his publication *The Making of Urban America*.
8. See Joan Dawson, *The Mapmaker's Eye: Nova Scotia Through Early Maps* (Halifax: Nimbus Publishing Limited, 1988) p. 27.
9. The Vaudreuil manuscript map was held by British authorities and was never made available in published form. Thus Bellin was unable to make use of its more accurate information about the Halifax settlement. For a discussion of the Vaudreuil manuscript see Joan Dawson, *The Mapmaker's Eye: Nova Scotia Through Early Maps* (Halifax: Nimbus Publishing Limited, 1988) p. 85.
10. See *Ibid.*, p. 31.
11. See R. Cole Harris, Editor, *Historical Atlas of Canada Volume I: From the Beginning to 1800* (Toronto: University of Toronto Press, 1987) p. 51.
12. See R. Cole Harris, "The Pattern of Early Canada", Graeme Wynn, *People Places Patterns Processes* (Toronto: Copp Clark Pitman Ltd., 1990) p. 360.