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Montreal and Its Waters: An Entangled History

Michèle Dagenais

‘Where is my river, the St. Lawrence? It is here. You can’t hear it. It’s like the horse that awaits you in the stable. You don’t see it. But I can feel that it’s there, that it flows while it pretends not to flow, that it embraces the city...’¹

This quote suggests the complexity of the relationship between contemporary cities and water. This relationship is characterized by a number of entanglements that often escape the notice of the observer, even though they are no less real than the tangible entities of land and water. These words, borrowed from novelist Réjean Ducharme, date back to the late 1960s, a key period in the recent history of Montreal, which, like many North American cities, suffered from deindustrialization. At the time, discourses critiquing the strong push towards urbanization since 1945 were abundant. The consequences of this transformation on the environment became more and more apparent as Montrealers started to suffer the repercussions of the recession. The idea that Montreal had cut itself off from water, and that it had turned its back on the St. Lawrence River, comes from this period. To this day, this myth is still central in debates concerning water in Montreal, feeding the desire to re-establish the city’s connection to water and to go back to the period when Montrealers lived in symbiosis with the St. Lawrence. Of course, the city and its population were never separated from water. What changed over time was the form that the water took within the Montreal landscape, and the relationship between the city and water.

The idea that there had been a break between the city and water has had a particularly strong resonance in Montreal, a city characterized by the omnipresence of water. Situated on an island at the confluence of the St. Lawrence and Ottawa Rivers, Montreal is located in the middle of a rich archipelago. The southern part of the island is surrounded by the St. Lawrence River, which approaches Montreal through Lake St. Louis before entering the strait of the Lachine Rapids and reaching the city. To the north, the Ottawa River enters the Lake of Two Mountains and reappears in the form of two smaller rivers, the Rivière des Prairies (also known as the Back River) and the

1 Réjean Ducharme, *Le nez qui voque* (Paris, Gallimard, 1967) in Bryan Demchinsky and Ealine Kalman Naves, eds, *Storied Streets: Montreal in the Literary Imagination* (Toronto: Macfarlane, Walter, and Ross, 2000), 123.

Mille-Îles River, which flow on either side of the island known as Île Jésus (now Laval). These rivers run for over fifty kilometers before flowing into the St. Lawrence River on the northeast end of the island. Water is also omnipresent in Montreal because it is an archipelago city, and its urban development has spread to the shores of the archipelago's rich water basin. Yet although the city's abundance of freshwater is often celebrated, Montreal has become the object of a good deal of criticism. The presence of waterways around Montreal complicates traffic in and out of the island, and is the subject of numerous complaints. In fact, crossing the rivers surrounding Montreal can be a frustrating ordeal due to frequent traffic jams on the bridges.



Figure 1:
Montreal and its
environment, circa
1900.

Source:
Bibliothèque et
Archives nationales
du Québec

Be it through geography and the environment, nostalgia, or everyday complaints, all debates surrounding Montreal's waters attest to the fact that the city's relationship to them has always been experienced and mediated through two intersecting processes: (1) the actual state and presence of water in the landscape and (2) current representations of water and the ways in which water manifests itself in everyday life. Today, these two dimensions are as closely intertwined as they were in the past. It is this

entanglement that I would like to disentangle in this article in an effort to highlight the ways in which Montreal's relationship to water has been transformed over the years from the pre-industrial period until today. Hence, I propose to reflect upon the co-construction of the city and its waters: in order to do this, I will present the main findings of extensive research I have conducted on Montreal and its waters from the beginning of the nineteenth century.²

To what water am I referring? How can it be defined? In my research, I approached the study of water in its entirety and in its diverse forms, examining both the waterways that surround the island and the water that runs through the city's underground networks. I consider water in its tangible dimension, as a physical element that has developed alongside Montreal, and which at the same time helped facilitate the transformation of the city. I also contend that water cannot be studied without considering the interrelated social and cultural dimensions. Thus, I examine water on a socio-cultural level: as a crucial component in the production and transformation of the Montreal space.

This research was inspired by environmental history and urban history. In the past few years, many works associated with environmental history focused on the history of waterways. Studies on the Rhine, Bow, and Columbia Rivers led to rich monographs in which authors examine the natural and social dynamics at the heart of the rivers' transformation over time. Yet by making specific rivers the central object of their study, these authors tend to see rivers as autonomous entities. They sometimes neglect the spatial context in which the history of these waterways has been inscribed. In sum, these rivers were studied primarily as natural objects.

However, when urban historians took on water as a research subject, they largely studied the phenomenon of networking and its impact on the structuring of urban space. Less frequently, attempts have been made to assess how the natural characteristics of a setting weigh on the configuration of technical networks, or to document the fact that technical networks formed at the junction of the urban and the natural, and how this influenced the political and technical decisions taken. For these reasons, urban

² I would like to thank Nadine Klopfer and Christof Mauch for inviting me to present an overview of this research at a Rachel Carson Center seminar in June 2010. I would also like to thank Daniel Rueck, whose comments were very useful in preparing for this seminar. I recently published a monograph outlining the results of this research entitled *Montréal et l'eau: Une histoire environnementale* (Montréal: Boréal, 2011).

historians generally tend to perceive the natural environment as a cultural object. Urban environmental historians have recently produced some studies that shed light on the intermingling of natural and the built environments in cities. This approach is also useful to help grasp the natural and social processes through which cities have been transformed over time, and to perceive of them as hybrid spaces.

Inspired by these historiographies, I have conducted a study on Montreal and its waters using a two-pronged approach: first, by showing how the territorial urbanization process and its extension modified the Montreal's hydrology and riverside environments, and, inversely, by demonstrating how the transformation of watercourses and their inclusion in technical networks contributed to urban development. When I refer to water in its plural form, it is to draw attention to the fact that water is not a permanent element and does not have the same characteristics in every situation. Whether I am dealing with the present or the past, it is important to perceive water as both a reality and a concept to be denaturalized. Hence, I have constructed water as an historical object, or as an object that must be historicized.

The reality of water was constructed according to representations as well as the changing forms of this element. How were these representations elaborated upon? What were the processes that transformed water into an object to be understood and managed? I have chosen to use the term "perspective" to take into consideration the theories, values, and beliefs in circulation through which the collective relationship with water was built upon. Therefore, I have structured this article around the following diverse perspectives that show how water was conceived of and represented, how and why its forms have changed over time, and what its developments and uses are.

The idea of circulation for governing the city

The starting point for a new era in Montreal's history coincided with the demolition of its fortifications at the turn of the nineteenth century. At that time, the destruction of the surrounding walls was the most visible sign of the ongoing redefinition of the city, its boundaries, entities, and organization as a whole. This happened a couple of years after the central authorities, in 1792 and 1796, had redesigned and extended Montreal's borders to include a territory much larger than the one than that had previously been

established. Both the extension of Montreal's boundaries and the demolition of the walls attested to a new way of conceptualizing space, which from then on was imagined in a more dynamic fashion. This new perspective reflected the idea of circulation in governing the city. The same concept was also visible in the actions of the political elite, who now thought of Montreal in a more comprehensive way, showing their ability to anticipate the city's growth and conceive of it in relation to future trends.

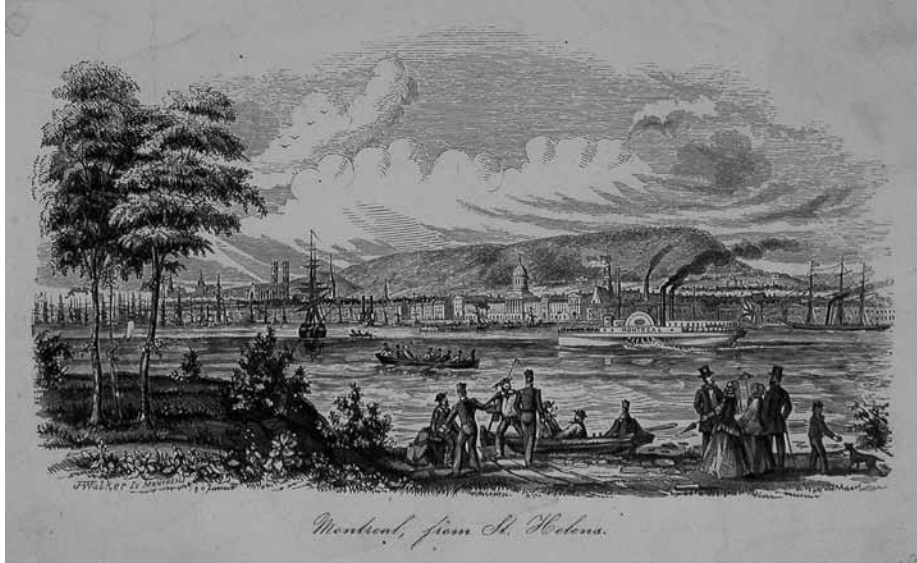


Figure 2:
Montreal from
St. Helens Island,
John Henry Walker
(1831-1899).
Source:
McCord Museum

Water, which up to that point had rarely been mentioned in public documents, became an increasingly important object in debates. During this period, water was mainly discussed alongside issues relating to circulation. On the positive side of the discussion was flowing water. It started to be considered important to profit from water in order to expand commerce and the shipping industry. On the negative side were discourses mainly referring to stagnant water; decision-makers considered this an obstacle that hindered movement and traffic in the city, in addition to being detrimental to the city's health. Such discourses surrounding water and water-related problems prepared for, as well as accompanied, its governance. More than being an accurate description of this reality, these accounts played a crucial role in fostering a new understanding of the territory and the relationship between the city, its inhabitants, and its waters. What is also striking is the fact that during this period, the words used to describe water or to com-

plain about related problems betrayed the fact that there were very few opportunities to change the situation, be it on a political, scientific, or technical level.

In 1828, near the end of this first period of transformation, Montreal merchants and dignitaries petitioned the central government for a charter that would allow them to govern the burgeoning city. The incorporation of the city in 1832 led to the first efforts aimed at organizing the urban fabric and controlling the surface water. Certain streams going through the city were canalized or covered. In the aftermath of these changes, many of the small bridges allowing residents to cross watercourses were demolished. Montreal's elites also succeeded in obtaining the power to develop some facilities intended to expand the capacity of the city's harbor. But because of the tense political life at the end of the 1830s, few of these projects were realized during this period.

Running water as a tool for managing the urban environment

The mid-nineteenth century ushered in a new era characterized by the growing importance of technical means and their capacity to reshape urban settings. This period led to a closer intertwining of the natural and the built environment. Central to this period was the shift towards "running water." In the case of water from the St. Lawrence, freshwater was transformed into "running water" that circulated through the urban space via pipes and conduits. It became the quintessential means for relieving urban problems of the day, cleansing the city, and structuring political life. This shift in perspective coincided with the advent of the sanitary ideal as a new framework intended to govern Montreal during this period of heavy industrialization. This framework rested upon the idea that the solution to urban turmoil was a continuous flow of water. Achieving this solution required turning freshwater into a commodity that could be measured, channeled, transported, used, and taxed. In Montreal, this shift in vision was the result of a two-pronged transformation: first, a transformation on the political level via the municipalization of Montreal's territory; second, a transformation on the environmental and technical levels with the transportation of freshwater and its commodification.

These two changes took place simultaneously and fed into one another. In fact, Montreal's political territory came into being with the actual construction of drinking and wastewater systems and the creation of a regulatory framework governing their use.

In turn, new uses for water arising from its broad distribution helped consolidate the developing municipal space. But the ability to provide a reliable and continuous distribution of water was not realized all at once. Among other requirements, such a project would always need adaptation to meet demand. Thus endowed, Montreal appeared to be undergoing a continuous process of adaptation and progress. While this process was never completely finished, it had to be maintained, inspected, and improved upon. The maintenance operations required by all the municipal projects were tangible proof of the power of the city.



Figure 3:
Bird's-eye view of
Montreal at the
turn of the twen-
tieth century.
Source:
McCord Museum

During the same period, considerable construction work was undertaken to transform the St. Lawrence into a navigable waterway, a project deemed essential for ameliorating the traffic of goods, capital, and humans. An entire set of empirical data was gathered to measure the water level and the water flow, its slope, its currents, and ice movements. This data also provided information on the depth and width of the river from Montreal down to Quebec City, situated 250 kilometers further down the St. Lawrence. By enabling objective knowledge of the river, the collected data provided arguments to sustain the ambitious projects that economic elites wanted to undertake in order to transform the river into a seaway. In addition to such constant interventions related to water networks, the work done on the river transformed it into a permanent construction site. The river started to be seen as technical device susceptible to “improvement” according to human needs and definitions.

But like any undertaking that relies on natural elements, this project was never completed, and those involved had to deal with an environment that was forever changing. Before the end of the nineteenth century, this situation of permanent change had already become visible in the frazil ice that had formed at the entrance of the aqueduct canal, the city's main water supply facility. This was also the case with the floods that regularly occurred in the winter and spring. These, among other problems, can be read as signs of the irreducible character of natural elements that rebelled in the face of the harnessing efforts of industrialization.

The bacteriological perspective: Reconfiguring the relationship between Montreal and its surrounding suburbs

While the flows of water drawn from the Saint Lawrence helped make Montreal a modern, continuously cleansed city, it caused new problems with regard to where the wastewater was being discharged. The city was indeed being cleansed, but this was only achieved by removing the refuse beyond its limits and dumping it into the watercourses and territories of surrounding towns. The use of running water thus accelerated the deterioration of shoreline environments, particularly those downstream from Montreal and on the north shore of the island. The situation led to a new crisis that exploded in the late decades of the nineteenth century in the wake of the growth in population and the growth of suburbs around Montreal.

This crisis was partly related to an ongoing debate pertaining to the quality of drinking water. On the one hand, the use of waterways for both the provision of drinking water and the dumping of wastewater was increasingly questioned. Although idea of the dilution power of rivers was still considered valid, it was not possible to rely solely on it anymore. In fact the diluting capacity of running water was no longer sufficient for eliminating the growing quantity of sludge. On the other hand, a new perspective came to be accepted, namely the bacteriological paradigm. I will not go into the details of this well-known shift, which I have studied in detail in the Montreal context. It suffices to say that this new conception of water accelerated its commodification. Water started to be defined as an objective, measurable quantity reduced to its fundamental unit—a molecule of H₂O.

This new definition of water had important practical consequences. As with previous perspectives, it involved a new rapport to water and new relationships between urban settings and the environment. This new conception of water meant that from then on, the City of Montreal would not only have an obligation to provide running water, but also to guarantee its safety as well. By becoming the primary water supplier, the City of Montreal could thus impose its norms for sanitary installations. This shift led to the production of manufactured water, a move which happened through different social and political processes. Among other things, manufactured water was instrumental in heightening the power exerted by local and central governments on defining the environment and on local populations. For instance, from that time on, only scientists could attest to water's safety. This, in turn, discredited other empirical evaluations of water quality.

The bacteriological paradigm also contributed to the reconfiguration of the relationship between Montreal and its surrounding suburbs. The western part of the island, which primarily consisted of wealthy suburbs populated by Anglophone majorities, was able to maintain its autonomy from the central city in regards to the management of drinking water. But in the eastern part of the island, home to the less well-off French-speaking population, polluted wastewater from the city accumulated. This connection between wealth and topography was not coincidental: uphill and upstream land was more valuable, in part precisely because it was free of such problems. As a result, the eastern part of the island was forced to connect itself to the Montreal aqueduct in a position of increasing subordination to the central city. Even though this was not the only reason Montreal extended its city limits, the provision of drinking water eased the expansion.

Furthermore, from the moment Montreal was able to provide the surrounding areas with drinking water, it became less urgent to stop polluting the St. Lawrence and in particular the Rivière des Prairies with wastewater. By the end of the 1910s, the situation on Montreal Island had reached a breaking point. Where urbanized districts on the south side of the island disposed of their sewage by dumping it into the St. Lawrence, the new residential areas on the north side discharged theirs into the Rivière des Prairies, as did the small communities that had developed along its shores. In sum, through a set of water-related infrastructure facilities, waterways around the island were on their way towards integration into the city of Montreal's drainage plan.

The situation was particularly critical on the north shore of the island because the Rivière des Prairies was a smaller tributary and also received wastewater from upstream. In the 1920s, the building of a hydroelectric dam transformed the riverside environment to an even greater extent. It aggravated the water pollution problem in this area. It changed the river flow, thereby preventing the increasingly abundant sewage from being discharged, so that, as a result, it accumulated along the shoreline.



Figure 4:
Hydropower plant
on the Rivière-des-
Prairies, n.d.
Source:
Archives
d'Hydro-Québec
H2 Commission
hydroélectrique de
Québec

The construction of the dam had other consequences as well. By lowering the intensity of the rapids, the dam changed the flow of the Rivière des Prairies, creating new conditions favorable to swimming. During this time, recreational use of the river increased. In contrast to the part of the St. Lawrence next to Montreal, which had been largely transformed into a harbor facility, the Rivière des Prairies seemed like an oasis, appreciated all the more as its shores were easily accessible by urban transit. Here, the dam did not appear to be a problem. On the contrary, there were indications that the changes in flow would be beneficial for water sports. Thus, the already popular area became even more attractive. During the summer, hundreds of Montrealers flocked to the Rivière des Prairies. Even though the river's contamination was increasingly condemned, discourses of hygiene authorities and warnings published in the newspapers and posted on river banks had little impact.

The environmentalist perspective: Reconnecting the city with its river

In the early 1940s, hygiene authorities were joined by anglers and hunters in their complaints about the deterioration of the Rivière des Prairies and the St. Lawrence. But in contrast to critiques motivated by health issues, anglers expressed concerns regarding the leisure practices and other activities on the rivers. Through the discourses of anglers and hunters, a new battle was gradually taking shape. This time, it was in favor of protecting riverside environments for the sake of sport. This battle would have effects similar to the one conducted by medical authorities in that it would help redefine the Montreal area.

The arguments put forward by anglers' associations were similar to the ones expressed by conservationists at the turn of the twentieth century. Both groups were intent on protecting nature and natural resources. But at the same time, there was an important difference between the anglers and the conservationists. Where conservationists cited the importance of "wild nature," activists of the mid-twentieth century were preoccupied with the protection of "nature" in urban settings. In the Montreal area, anglers and hunters took the lead in commissioning inquiries to document the pollution of watercourses and rivers. Their studies contributed to the construction of a more holistic vision of the diverse functions of water and hydrology on a citywide scale.

This new movement, which favored the protection of the environment and which did not call itself "environmentalist" at first, became more active in the context of the intense economic and suburban development following the Second World War. This led to the densification of the Montreal area as well as the more intense occupation of the island's and region's shores. The attraction of the river banks provoked a phenomenon of encroachment on the littoral zones of the St. Lawrence and its tributaries. The resumption of important civil engineering projects on the St. Lawrence aimed at facilitating the transit of ships of increasing tonnage between the Great Lakes and the Atlantic transformed the river. All in all, these undertakings resulted in more water pollution and the privatization of shores.

An environmentalist perspective emerged from critical stances to the intense pace of the developments mentioned and the results of inquiries about the polluted waters. This new point of view, which focused on issues relating to water pollution and environ-



Figure 5:
Aerial view of
Montreal harbor,
circa 1945.
Source:
McCord Museum

mental deterioration, developed according to a new representation of waterways in the metropolitan region: they were considered sick and in need of healing in order to have new life breathed into them. The St. Lawrence was particularly targeted. This new perspective was also fuelled by a complex set of demands to protect and rehabilitate the waterways and to democratize access to the riverside environments and the water itself.

Dredging, encroachment, filling, dumping: new vocabulary and notions emerged to define the St. Lawrence and the assaults of which it was the target. All these words, and the realities they translated, helped communicate the project of reconnecting people and water. In fact, critics asserted that the traditional links that had connected the Montreal population and the river had been severed in the postwar era. New policies had to be implemented to reestablish the connection between the people and water in the area. All this critical debate contributed to the establishment of an enchanted vision of the past that longingly looked back at the benefits people had apparently

drawn from the waterways surrounding Montreal in the “good old days.” By doing so, these debates also contributed to the creation of the myth that the river had once been dedicated to recreation.

From the 1970s onwards, the environmentalists were at the forefront of the movement to rehabilitate the St. Lawrence. They replaced the political elites of the early nineteenth century as well as the engineers and the hygienists of subsequent periods. Environmentalists’ complaints about the degradation of the water quality surrounding Montreal fuelled growing criticism of development and land management in the post-war period. The rancor was further reinforced by the fact that Montreal had been hit hard by deindustrialization. Activists exerted pressure on political authorities for the sake of nature protection and the democratization of riverside environments. It was in relation to these two new goals that the relationship of the city to its waters would be defined from then on.

The city’s reconnection to water did not exclusively depend on the efforts of the anglers and environmentalists. Other campaigns were undertaken during this period of deindustrialization in the same vein. In response to the closing of factories and the unemployment that ensued, public authorities worked to rejuvenate parts of the river abandoned by industrial facilities by developing riverside parks and new openings onto the river. The development of the Old Port, the rehabilitation of the industrial canal bank Lachine, and the development of parks on the perimeter of the island in the 1980s were all evidence of accomplishments in this direction. In sum, these developments partially transformed the orientation of Montreal which, deprived of its industrial base, turned towards recreation in order to revitalize its economy. Moreover, such efforts legitimated the desire to reconcile water and urban life, a goal that had been in the works since the 1950s.

But where did this push towards restoring water and natural environments lead? On which environment and which waterways did such efforts concentrate? The projects, far from helping recover the lost river, further contributed to its transformation and urbanization. In fact, discourses and initiatives that promoted the protection of the St. Lawrence and its reappropriation by the population involved increasingly invasive interventions in order to decontaminate, get closer to, or reconnect with the river. Overall, the desire to reconcile the city and its waters did not lead to a new relation-

ship between them so much as it facilitated the adaptation of the latter to the former according to new aspirations, notably based on leisure considerations.



Figure 6:
Shad fishermen
below the hydro-
power plant on
the Rivière-des-
Prairies, 2010.
Source:
Michèle Dagenais

Conclusion

The extent to which remarks in favor of better access to river banks and the protection of the St. Lawrence continue to be formulated in terms of reconquest, recuperation, and re-appropriation is striking. Such terms evoke the idea of property, as if the river had originally belonged to the population, was stolen, and is now being reclaimed. This project of reconquest, as we have seen, had its roots in the 1960s and 1970s, and was first influenced by important changes in the Montreal landscape, then by deindustrialization. A number of voices rose up against developments that had occurred since the Second World War. These critics called attention to the pollution of the archipelago's waters and the concurrent deterioration of riverside milieus. Thus, these voices contributed to the construction of the idea that Montreal had turned its back on the St. Lawrence, and that from then on, the population had been cut off from the river. Thus, the myth was born that the city had once been in close communion with the river and that the population

had at one time lived in symbiosis with water. Since its creation, this myth has occupied a central place in debates surrounding demands for increased access to the water.

One of the objectives of my research has been to debunk this myth in order to show that the city and its population have, in fact, never really been separated from water. What changed over time were the forms in which water was present in the Montreal landscape and the city's relationship to water. Yesterday, as today, the presence of water and the terms defining access and supply result in constraints connected to its biophysical milieu as much as to the nature of social and power relations. The population's relationship to water was the product of complex entanglements characterized by the policies adopted and technical decisions that were carried out, as well as by environmental transformations. In sum, the changing ways in which water has been portrayed at different times were constantly produced and reproduced through both the natural and the socio-political processes that I have brought to light in this study.

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