Mobilising Urban Heritage to Counter the Commodification of Brownfield Landscapes: Lessons from Montréal’s Lachine Canal

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Résumé
Cet article avance que la pleine reconnaissance du caractère patrimonial des friches industrielles urbaines ouvre de nouvelles perspectives de solutions à l’égard des enjeux afférents en matière d’urbanisme, d’aménagement et de politiques publiques, qui sont le lot des projets de requalification urbaine. Dans le présent contexte post-fordiste, une meilleure intelligence de la signification des paysages hérités de l’ère de la production industrielle et rendus désuets par la désindustrialisation et la restructuration économique est de nature à conduire de meilleures pratiques de reconversion urbaine. Nous proposons une approche—la morphologie urbaine—qui produit des connaissances relatives aux structures urbaines héritées ainsi qu’à l’ensemble des relations spatiales et processus de transformation dont ces structures sont le reflet et le produit, afin de mieux asseoir les efforts contemporains de revitalisation urbaine. L’article discute enfin en quoi l’approche morphologique proposée, qui appuie la volonté de prendre acte des considérations relatives à la sauvegarde du patrimoine industriel dans les pratiques et discours relatifs au développement des friches industrielles, est à même d’éviter l’appauvrissement irréversible de leur valeur culturelle qui résulte de leur relégation au statut d’espace marchandisé, tout offert à la consommation éphémère.

Mots clés: Montréal; Canal Lachine; friches industrielles; patrimoine industriel; morphologie urbaine
Abstract
This paper proposes that recognising and leveraging the heritage value of brownfield sites may open the door to new solutions to planning, policy, and design challenges common to regeneration projects. In a post-Fordist context, a better understanding of the historical significance of inherited landscapes of industrial production, rendered obsolete by deindustrialisation and economic restructuring, can lead to more appropriate forms of conversion. We propose an approach—urban morphology—that leverages knowledge of urban structures, their relationships, and the processes through which they were transformed, to create a matrix capable of guiding regeneration efforts. The promise of this approach is then discussed in the context of integrating heritage preservation considerations into brownfield redevelopment practices and discourses as a means for avoiding the reduction of such sites to landscapes of consumption.

Key words: Montréal; Lachine Canal; brownfields; industrial heritage; urban morphology

Introduction
Economic restructuring and deindustrialization have left large tracts of land and obsolete industrial buildings underused or unoccupied. Often located in symbolic locations in close proximity to city centres, the redevelopment of these frequently contaminated areas and facilities for post-industrial purposes is high on the urban planning and policy agenda in the West. The term brownfield redevelopment was coined to designate these urban conversions, which are often seen as a desirable and more sustainable alternative to greenfield development entailing the urbanization of agricultural or forested land on the suburban periphery. We contend that, thus far, in Canada and North America, the question of brownfield redevelopment has been, for the most part, discussed solely from environmental or economic development perspectives. Such predominantly technical and technocratic perspectives and the policies that are derived from them address critical issues, but we posit that they are too narrow and that they fail to address the historical and cultural significance of these sites; these landscapes testify to the historically important urban experiences of generations of migrants and immigrants who settled in the close vicinity of their industrial workplaces.

Neglecting to situate brownfield redevelopment policies in a broader cultural and historical framework allows for the irreversible destruction of inherited built landscapes whose heritage values are not yet fully recognized. In some cases this insensitivity paves the way for tabula rasa redevelopment that produces landscapes that are economically, culturally, and spatially disconnected from surrounding urban neighbourhoods.
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Even when brownfield redevelopment efforts entail maintaining and converting old industrial buildings, incomplete knowledge of the complex histories of industrial landscapes and their contiguous residential neighbourhoods contributes to the generation of impoverished redevelopment schemes. Overly technocratic planning approaches result in culturally disembodied and spatially atomised urban environments and reduce them to landscapes of consumption. We use the expression ‘culturally disembodied built landscapes’ to evoke a commodified built environment, the production of which is predicated on exchange value determined by property investment. This tends to ignore use values determined by inhabitants’ activities and habits and the resulting landscapes are severed from locally generated cultural models of urbanisation. Through knowledge generated by integrating the study of urban and architectural forms, we propose a new path for conceptualising the heritage value of these landscapes—including economic and cultural ramifications—and avoiding such disembodiment and atomisation.

We set about to demonstrate how public policy and planning could benefit from an approach that studies the industrial landscape as a component of an active urban material culture: of the culturally meaningful concrete objects (Frantz, 1998, p. 791; Grassby, 2005; Hodder & Hutson, 2003) that constitute the city, and a collective product enacted in the historical longue-durée. This approach finds its roots in urban morphology, a research tradition focusing on the evolution of urban forms (i.e. morphogenesis), examining the consistency and resilience of built space in the face of social, political, and economic systems and structures. It also addresses the historical sedimentation of urban artefacts by unveiling the mechanisms of transformation and conservation that affect the evolution of built environments. The knowledge produced stresses the structural and genetic qualities of the collective city-building effort while shedding light on the production of home-grown cultural models of urban habitat (Moudon, 1994). It could prove invaluable for the production of post-industrial landscapes that resonate with the culture, history, and the urban experiences of local populations and that truly contribute to the rejuvenation of adjacent inner-city districts whose fates were so intimately tied to the rise and fall of the urban industrial machine.

Beginning with a critical overview of current research on brownfields, we move to a discussion that integrates our research on Montréal’s Lachine Canal (Bliek & Gauthier, 2006) with the theoretical and methodological framework of urban morphology. This approach is then applied to the policy context of brownfield redevelopment, with particular reference to the industrial landscape of the Canal (see figure 1). We call for a leveraging of morphological knowledge in order to suggest a matrix capable of guiding regeneration efforts and opening the door to new approaches to planning, policy, and design challenges common to regeneration projects. The paper discusses the promise of this approach, emphasising in
particular its potential to address two closely connected issues: cultural disembodiment and spatial atomisation, and their manifestations in the reduction of redeveloped sites to landscapes of consumption, and in the heightened unevenness in the effects of revitalisation.

Figure 1. Industrial heritage as identified by the City of Montréal. The Lachine Canal area includes the series of sites at the south west of the business district.

Source: City of Montréal Master Plan, 2004.

Brownfields and the Urban Heritage and Physical Planning Knowledge Deficit

The term brownfield is often used to describe sites that are “abandoned, idle or underutilized commercial or industrial properties where past actions have caused known or suspected environmental contamination, but where there is an active potential for redevelopment” (NRTEE, 2003, p.ix). Brownfields are the result of a variety of inter-related, social and economic changes, including disinvestment, new technologies, forms of labour organisation, and modes of transport, often referred to collectively as deindustrialisation, which have been integrated into the urban landscape (Bluestone & Harrison, 1982). Brownfields are thus “a tangible and visible result of the inter-linkages between economic shifts and urban change” and of the radical restructuring of the global economy in recent decades” (Moore, 2002, p. 325): transformations frequently associated with significant trauma and difficulty for working class urban neighbourhoods.

For over a decade, Canadian governments have identified brownfield redevelopment as a critical policy issue. There are approximately 30,000 brownfields in
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Canada, concentrated in urban areas where industrial activities have occurred, and as much as 25% of the land in Canadian cities may be contaminated by its industrial past or present (Benazon, 1995, p. 18). Research on redevelopment has examined brownfields from many angles, such as key components of local economic development strategies (Howland, 2003), regional ‘smart growth’ plans (Greenberg, Lowrie, Mayer, Miller & Solitare, 2001), and initiatives to improve environmental quality and increase the supply of urban parks (De Sousa, 2003). Public agencies in Canada (NRTEE, 1997; 2003) and the United States (EPA, 2003) have tended to emphasise instrumental questions such as public health outcomes and community development, and technical issues such as soil remediation (Benazon, 1995), financing, and liability (CMHC, 1997). This narrow focus has been criticised by DeSousa (2002, p. 261; 2003, pp. 195-196; 2005), whose research has brought to light a series of collective benefits associated with brownfield redevelopment in contrast with greenfield development.3 Lange and McNeil’s (2004) kindred effort also attempts to broaden the definition of successful brownfield redevelopment, however, the literature largely eschews questions of urban planning, design, and, especially, heritage in favour of a more technocratic and instrumental approach.

Tiesdell and Adams (2004) claim that the creativity and ingenuity of designers may be of more importance in brownfield projects due to the innately challenging contexts of brownfield sites. They argue, based on the British experience where sustainable urban revitalization has become a national priority,4 that “the involvement of skilled designers together with the need to overcome the intrinsic difficulties of brownfield sites means that ‘typical’ brownfield development is often better designed than ‘typical’ greenfield development” (2004, pp. 23-25). Understanding and meeting these ‘intrinsic difficulties,’ we argue, demands not just creativity but also an analytical framework capable of conceptualising brownfields in terms of the complex historical sedimentation. These sites became anchors of an industrial-era urban fabric that, in its character, organisation, and familiarity to its inhabitants, remain a central component of our material culture. Current research, concentrating on communicating the collective benefits of brownfield regeneration fails to address the historic spatial and material characteristics of brownfields, with troubling consequences particularly with respect to the complex links between such sites and surrounding inner-city neighbourhoods.

Brownfields, which are frequently in desirable, central locations, are often conceived as part of larger strategies for success in the post-industrial and cultural economies (Hutton, 2004a; 2004b; 2006; NRTEE, 2003). Many researchers have criticised redevelopment projects emerging in this context on the basis that they are simulacra of urbanity. Whatever urban heritage is conserved is often ruthlessly appropriated and the sites reduced to globalised and ‘disneyfied’ landscapes of consumption, opening a fissure between the economic livelihood and material culture of affected neighbourhoods, and those of the implanted and
commodified post-industrial spaces (Hannigan, 1998; 2005; Judd & Fainstein, 1999; Zukin, 1982; 1998). In response to such concerns, Montréal civil society, in particular agents of the social economy, have repeatedly stressed the potential for these sites to become lynchpins in the development of the social economy (Fontan, Klein & Tremblay, 2004; Fontan, Lévesque & Klein, 2003). In the case of the Lachine Canal, the Regroupement pour la relance économique et sociale du Sud-Ouest (RESO) has explicitly linked benefits of economic transition for communities in vulnerable neighbourhoods with physical planning and urban design (RESO, 2001).

As one of the cities hardest hit by deindustrialisation, Montréal has become one of the most proactive jurisdictions when it comes to addressing these issues. It has been repositioning itself as a highly visible centre of creativity, knowledge, and services in the post-Fordist economy through initiatives in design, governance, and planning (De Sousa, 2006; Deverteuil, 2004; Rantisi & Leslie, 2006). The Technopôle Angus (Fontan et al., 2004) and the Cité du Multimédia exemplify the importance of brownfields in place-based policy initiatives. The first case was initiated and led by community groups and the presence of strong and critical civil society and social economy perspectives and engagement in this process testifies to the complex nature of brownfield redevelopment. It goes beyond the technical and fiscal roadblocks so prevalent in the literature to air concerns that contemporary transformations do not reflect the needs of the communities, whose populations largely cannot identify with or integrate into the new landscapes emerging from the ruins of Fordist industrialisation. These difficulties can result in social tensions and can undermine the original goals of proposed projects (Rose, 2004).

A Tale of Industrial Urbanisation: The Lachine Canal Basin

The idea of a canal bypassing the Lachine rapids is as old as European settlement in Montréal, though it was not until 1825 that the Lachine Canal opened for navigation. The Canal’s 1840s upgrading set the stage for Montréal to become Canada’s principal industrial centre, through the growth of twin infrastructures of economic practice (Tulchinsky, 1977), (i.e. the emergence of a post-seigneurial property market) (Bernier & Salée, 1992), and physical assets (transhipment infrastructure, production facilities, and energy sources) (Poitras et al., 2004, p. 19). Robert Lewis chronicles the swift rise of an industrial corridor in the countryside around the new hydraulic complexes at Mill Point, Saint-Gabriel, and Côte-Saint-Paul from the 1850s onward; “by 1861 [The Lachine] Canal’s firms accounted for more than a quarter of the city’s rent” (2000, p. 106). In this way, the Lachine Canal manufacturing district “represented the fusing of place-bound links with geographically shifting capital. In each cycle of growth new territorial nodes consisting of new forms of modern plant design, technological innovation, and
factory methods were superimposed upon the metropolitan landscape” (2000, p. 259). Railways were crucial to the concept (Keefer & Nelles, 1972) and structure of this environment, as a means of linking “firms to one another and (integrating) individual sites, districts, and the entire metropolitan area into one functioning entity” (Lewis, 2000, pp. 264-265). It is from interplay between these nodes, the rural property structure, and the early road network (Desjardins, 1999, p. 65, p. 130) that the working-class neighbourhoods of Griffintown, Pointe-Saint-Charles, Sainte-Cunégonde, Saint-Henri, and Côte-Saint-Paul emerged.

Following a gradual, relative decline from the 1920s as industries shifted to more modern locations elsewhere in Montréal (along the Canadian Pacific Railway’s beltline around the northeast of Montréal, further west to Lachine and Lasalle, and later on to suburban locations made accessible by highway infrastructure) and then a starker absolute decline as industries moved elsewhere on the continent and globally following the 1959 opening of the Saint-Lawrence Seaway, the Canal underwent a series of significant changes. Closed to navigation at the beginning of the 1970s, it was partially filled with debris from the construction of the metro system. From the 1980s, the Canal corridor was turned into a linear park, emphasising a peculiarly semi-natural state as though the Canal was being recast as a folly: a mix of tourism, ruins, and official history. This recasting as a tranquil landscape of residence and recreation has underpinned efforts to revitalise nearby working class neighbourhoods, whose populations were decimated by deindustrialisation, and earlier urban renewal schemes during the latter half of the 20th century (Deverteuil, 2004). These transformations, and the development of strategies for coping with them, have been the object of numerous studies examining history and heritage, generally in relation to specific planning and development initiatives (Dubois, 2005; Jean-Claude La Haye et associés, 1969; Parks Canada, 1977; 1979; 2004; Willis & Parks Canada, 1983), indicative in timing, content, and intent of an emerging consensus to capitalize on the history of the Canal as part of the shift towards a more recreational and tourism-oriented economic development strategy (RESO, 2001).

This strategy appears to be gathering steam, as numerous brownfields on both sides of the Canal are now undergoing significant transformation into residential, recreational, and tourism-oriented land uses. The Canal is being transformed from the cradle of Canadian industry to a new recreational and residential landscape. Re-opened to pleasure navigation in 2002, the Canal has now become a major tourist destination, linking the increasingly upscale Atwater Market with Vieux-Montréal and the Vieux-Port. One section, in the Pointe-Saint-Charles district, was the subject of controversy in 2006 when it was targeted by Québec’s provincial lottery corporation and the Cirque du Soleil entertainment group for the development of a casino and theatre complex. The plan was put to rest after the Cirque du Soleil pulled out amidst vigorous opposition (RESO, 2006) from...
a coalition of community organisations (Shields, 2006) and unfavourable reports from the Direction de santé publique de Montréal (Chevalier, Montpetit, Biron, Dupont, & Caux, 2006).

Brownfields, Urban Transformation, and Morphology

The semantic pairing of the terms brownfield and greenfield, while downplaying barriers related to fiscal, liability, and technical issues, evokes a blank-slate imagery that obscures the richness of derelict industrial sites in terms of heritage and traces of still-relevant material culture. In addition to the economic and cultural disconnects discussed above, this knowledge deficit has spatial and physical ramifications in that it facilitates redevelopment practices that can cause irreversible ruptures with the material culture embedded in the urban landscape, a source of significant meaning and important spatial connections for the surrounding neighbourhoods and their populations. Even when the historical significance of sites previously used for industrial production is recognized as an asset, the tendency is to instrumentalize this heritage value through a commodification of the built landscape that drains it of most of its historical substance. Rather than treating them as tabulae rasae, if brownfield sites were to be recognised as significant repositories of urban industrial heritage, the challenge becomes one of translating these qualities into concrete planning, policy, and design substance. The Swiss urban morphologist Sylvain Malfroy puts forward the notion that the regeneration of derelict industrial areas should indeed be understood as “a work of completion” (1998a, 141), in that such sites are embedded in the surrounding urban fabrics and bear the traces of a long sedimentation of urban material culture that could inform and guide contemporary actions.

The industrial urbanisation of the Lachine Canal basin testifies to this sedimentation process in a highly expressive way (Bliek & Gauthier, 2006). Unfortunately, recent redevelopment in the area illustrates no less eloquently the risks of a predominantly instrumentalist and entrepreneurial governance approach with a technocratic focus to reduce a complex multi-layered and multifaceted space into an impoverished landscape of consumption, culturally disembodied and spatially atomised. The following sections discuss how the framework of urban morphology could contribute to a reform of brownfield redevelopment policies and practice, drawing from a discussion of the case of the Lachine Canal in Montréal to illustrate the potential of such an approach.

Urban morphology focuses “on the tangible results of social and economic forces: [morphologists] study the [material and spatial] outcomes of ideas and intentions as they take shape on the ground and mould our cities” (Moudon, 1997, p. 3). It stresses the structural qualities of the built environment, seeing urban material culture not as a reflection of modes of production or as the sole product of decisions and purposeful building practices of social agents, but as having its
own structure and logic, which are imposed on social agents by offering them a substance to work with that is only partially malleable (Bliek & Gauthier, 2006). In this sense, urban morphology infers that the urban built landscape is socially produced while simultaneously producing society by offering (or withholding) opportunities for agents to realize themselves socially, economically, and culturally (Gauthier, 2003; 2005). The building of the city belongs to the longue-durée, lending it such a structural character; it is “for precisely this reason—the temporal diffusion of interventions—that the resulting collective product is of an order that is properly structural and therefore not intentional” (Malfroy, 1998b, p. 29). This structure is “never given from the start but must be discovered or invented, through intensive work developing new hypotheses and techniques for analysis” (1998b, p. 30).

This process consists of multiple parts: a ‘reading’ of the material form of the city, revealing its latent, underlying logic, and a work of decodification or interpretation of the city through its cartographic reconstruction over time, revealing the constitutive elements of its urban form and their relations through time (Gerosa, 1992, pp. 183-184; Malfroy, 1986, p. 126; 1998b, p. 29). For morphologists, ‘reading’ the material form of the city is the key to revealing its latent, underlying logic; the reading of coherent patterns in space is coupled with the possibility of identifying regularities in temporal transformation, i.e. structural permanencies.

Urban studies literature tends to portray industrial spaces as the reflective outcome of capital fixing itself in concrete objects and tools of production or as a neutral backdrop or stage on which is played out the drama of social relations. Work by Bliek and Gauthier on the Lachine Canal basin has focused on how the production of the built environment mediates social relations and how the cumulative effect of these social transactions and interaction with concrete objects propels the material culture of any city on its particular course. It is the inherent nature of the built landscape to record the actions that the humans exert on it, and in so doing to testify to the temporal, spatial and cultural conditions that prevailed at its formation and transformation. Their morphological study (2006) captures, among other things, the intricate patterns that result from the weaving of industrial infrastructures that are part of networks of continental proportions with a residential street network, an allotment system and architectural forms that reflect local domestic habits.

The study supports the argument that the spatial history of industrialisation along the Lachine Canal took place in two waves, followed by deindustrialisation and an ongoing post-industrial development wave. It contends that this former landscape of production is characterised by a complex interplay involving the emergence of a specialised industrial spatial order and a pre-established residential spatial order. In the first wave, industrial development was largely informed by vernacular architecture and residential settlement patterns, including masonry and
carpentry techniques reminiscent of the affluent houses and institutional buildings in Vieux-Montréal (see figure 2). The configurations of and relationships between the street network and allotment system, as well as the spatial deployment of buildings, were hardly distinguishable from their counterparts in the old city. The second phase witnessed the gradual adaptation of architectural forms to then emergent industrial imperatives, a process marked by increasing specialisation and complexity in the architectural forms and spatial arrangement of industrial facilities. This second phase took place on ground already laden with the traces of the first phase, resulting in a distinctive dialectic between industrial and residential spatial orders. This dialectical relationship between traditional extensions of the largely residential, non-specialised city and the introduction of specialised urban elements related to the needs of industry and continental transportation is visible on maps produced as early as 1846 (see figure 3) (Cane, 1846), and became increasingly pronounced with further industrialisation (Hopkins, 1879). A historically-grounded reading of urban form along the Lachine Canal reveals the permanence of the agricultural route and subdivision pattern (Desjardins, 1999) and makes visible the vernacular character of its subdivision and urbanisation.

Figure 2. Many industrial complexes emerged out of the agglomeration of pre-existing, standard buildings.

As the Canal district became industrialised, the structural nature of this residential, or non-specialised, spatial order was increasingly apparent, furnishing particular spatial opportunities and constraints to the agents of industrialisation and
their projects, akin to a structural framework that informed development. Early urban extensions, such as Griffintown and the north-eastern portion of Pointe-Saint-Charles were largely continuations of a familiar residential landscape: the dimensions and configurations of streets and parcels, and the deployment of most early building types were common to much of central, working-class Montréal (Legault, 1989; Young, 1986). Later developments, particularly those further west at the Saint-Gabriel locks, in Saint-Henri, and in Côte-Saint-Paul, on the other hand, made a break with these precedents, deploying streets, parcels, and building types unconventionally, in terms of dimension, configuration, and the relationships between these urban elements. Rather than reflecting vernacular practices of non-specialised urbanisation, dating back to the French regime (Gauthier, 2003), this emerging landscape responded to new imperatives, accommodating particular technologies, (hydraulic and coal-fired) energy sources, and production processes. The characteristics of this new landscape might have been more dependent upon the transhipment or production needs of particular businesses (the creation of a quay- or track-side staging area, or the need to access hydraulic energy or to store coal supplies) than upon spatial models that have their roots in the residential tradition; an ensemble of parcel and house dimensions and configuration informed by specific dwelling habits and domestic requirements, with rows of dwellings that frame in familiar ways the space of sociability constituted by the street.

Figure 3. Cane’s 1846 map of Montréal highlights the pre-emptive platting of lands adjacent to the canal as an extension of the existing city.

Source: Collections numériques de la Bibliothèque et archives nationales du Québec.
Much of the landscape produced under the auspices of emergent industrial necessities and spatial requirements, however, had already been subdivided and prepared for urbanisation (even if unbuilt) according to this earlier residential spatial order, resulting in a long and fluid dialectic. This relationship is expressed throughout the Canal district in the form of unique arrangements of industrial complexes, in which numerous facilities responded to the particular framework provided by a residential street and parcel configuration. In an era of de-industrialisation and conversion to residential and recreational uses, the opposite can now take place: the layout of residential projects can respond to the street and parcel configurations of superseded industrial complexes.

From a morphological perspective, the spatial characteristics of the industrial landscape along the Canal are conceived of as the diffuse and collective result of a complex interplay between the long-standing vernacular practices of urbanisation and the introduction of new technologies, energy sources, and production processes. The traces of this interplay and their meanings, inscribed deep in the landscape can (and should) be, we argue, at the core of the planning and design of any brownfield redevelopment projects in such a context. In the following section, we detail the contribution such knowledge can make towards the resolution of two important issues associated with brownfield redevelopment projects: the tendency towards a cultural disembodiment or disconnect, and their spatial atomisation or rupture in relation to their material and social surroundings.

New Readings of Urban Industrial Heritage

Brownfield redevelopment projects are often promoted as major initiatives at the scale of local communities and entire metropolitan regions. The attainment of objectives related to broader revitalisation and economic development strategies (for instance the de-stigmatisation of afflicted communities or the attraction of reinvestment to surrounding neighbourhoods) can be hampered by redevelopment approaches that fail to take into account the historical traces inscribed in the sites and that are at the core of their economic, cultural, and spatial linkages with the surrounding city. This is often recognised by economic development strategies related to these projects, particularly those that involve civil society and social economy actors with interests in employment and housing. For these efforts to be genuinely successful, however, we argue that reconfiguration must take into account the underlying logic of the landscape, as it has emerged from the neighbourhood through history.

The ability to read and draw from this logic in guiding contemporary transformation is crucial to avoiding cultural disembodiment and spatial and material atomisation in redevelopment projects. By this we mean ensuring that no disconnect occurs between the new project and the material culture of the city and its in-
habitants, and that rather than a blank slate, redevelopment is rooted in and contributes to the spatial patterns of its urbanised surroundings. The disappointment expressed by civil society and social economy actors in the Lachine Canal basin in Montréal speaks to a lack in current brownfield redevelopment practice that takes the form of economic exclusion, cultural disembodiment and spatial atomisation. Research and analysis that reads the historically and collectively produced spatial logic underlying the industrial landscape can provide the key to brownfield redevelopment that is truly contextualised and meaningful for its residents.

A look at redevelopment along the south bank of the Lachine Canal can clarify this point. This area has been affected by the recent redevelopment of the Redpath sugar refinery, designed in the early 1850s by the architect and surveyor John Ostell (James, 1985). Ostell was also responsible for the platting of many of the surrounding blocks on behalf of the Sulpician religious order (Young, 1986), in a configuration parallel to the Canal and characteristic of most urbanisation on the residential fringes of Montréal; indeed, many of the new parcels and blocks were originally occupied by typical dwellings. As industrialisation progressed, factories and transhipment facilities grew increasingly large and specialised, though they remained contained within Ostell's mid-19th century street grid and the relationship between factory and Canal was expressed through a normal street, though home to particular uses related to transhipment and observing maritime activity. After 1949, however, Canal Street and the northern end of Montmorency and Condé Streets were closed, and more recently, the grassy Canal bank was converted into a linear park and bicycle path, detached from the neighbourhood-wide public space system to which it once belonged.

The Lachine Canal has seen high levels of public investment: from 1997 to 2002, the federal and municipal governments invested over $100 million (Montréal, 2004, p. 231) in an effort to transform disused industrial infrastructure into a 're-naturalized' recreational amenity, historical interpretation site, and magnet for economic revitalisation. Despite these substantial capital infusions, the current redevelopment paradigm prevents the successful integration of much of this new park into the public space networks of surrounding neighbourhoods, constraining the diffusion of economic spin-offs and reducing neighbourhood access to the new amenity. While most commentators commended the preservation of old industrial buildings, such as those of the Redpath sugar refinery, and more generally the residential revitalisation of the Canal's formerly industrial banks, many community members expressed serious concerns about the economic disparity induced by an influx of residents espousing a 'loft-living' lifestyle (see, for example, Zukin, 1982) that the vast majority of the local population do not relate to and could ill afford. We contend that these very serious issues are in fact symptoms of a deeper cultural disruption, with a spatial dimension. Transforming the inherited industrial landscape involves an inevitable ‘recoding,’ but too frequently this
results in spatial configurations and material arrangements that are at odds with earlier industrial and residential spatial logics and cultural models that prevailed at its formation and through later transformations.

Industrial complexes such as the Redpath refinery, which gradually developed as an increasingly specialised ensemble, integrated emergent technologies (new production processes, connections to railway sidings, coal storage yards) and cultural models with a pre-industrial residential morphological and material culture matrix largely ignored in the current wave of redevelopment. As evoked earlier, industrialization, though propelled by a capitalistic effort of continental proportions and its technological imperatives, had to adapt to the local spatial and material conditions and was as such inevitably building upon the vernacular building traditions and knowledge systems, particularly in its initial stages. Knowledge of the spatial structure that conditioned industrialisation could help to make the most of the significant opportunities created by contemporary capital inflows. In its current configuration, the linear park along the banks of the Canal largely represents a lost opportunity. Recapturing the linear park as a public space that is an integral part of the entire neighbourhood system, in terms of accessibility and meaning, requires that the rules governing the spatial syntax of the public collective space and its relations with the private realm be uncovered and then enacted.

**Figure 4. The Redpath sugar refinery and the canal’s south bank as a landscape of production (left) and recreation (right).**

Sources: Archives de la ville de Montréal (left); Blick (right).

Such an approach is not evident with the Redpath refinery (see figure 4), as with much of the course of the redeveloped Canal, lined by large and often fenced properties that turn their backs to the new park, rather than creating a more active and formal interface in which the principal façades frame the major public space, and the spatial transition between the private realm and the park is mediated by a public street. What is particularly unfortunate with the example of the Redpath complex is that the initial subdivision of the land included a public street running along the Canal; the reopening of that street would have reinstated the public character of the space, in perfect congruence with the contemporary
function now assumed by the Canal. Similarly, the residential retooling of the industrial complexes gradually built on a residential substratum could have gained incredibly in cultural pertinence and historical appropriateness if informed by the underlying residential spatial logic active at its origins. In most circumstances, redevelopment did not entail attempts to reconnect with the site morphogenesis. The one exception is the Stelco site (see figure 5), located on the north bank of the Canal, which rehabilitated the residential blocks that structured the industrial configuration of the site.

Figure 5. The internal network of the Stelco complex (1949, left) represents a mix between the residential street grid and the industrial imperatives of railway and canal. Its residential conversion (right) shows the resilience of that hybrid.

Elaborating a matrix of urban elements and their syntax from the information provided by morphological analysis can serve to enhance the integration of new construction into a deeper system of material culture, going beyond ‘façadism’ or superficial ‘theming,’ but structuring it in harmony with the logic that guided previous urbanisation.

Conclusion

Our survey of the literature on brownfield redevelopment indicates that the policy implications of this type of urban development are a critical theme. Yet, in both academic and policy terms, the discussion is often narrowed to a relatively small number of technical and technocratic considerations. Little attention is given to the historical economic, social, and cultural significance of these sites of production that is crucial to understanding the inherited spatial framework of our cities.

We argue that this void has clear impacts on brownfields policy and particularly on the outcomes of regeneration programs and projects. One such impact is the sense of alienation and disenfranchisement felt by the populations of the
urban neighbourhoods who experienced first-hand the consequences of deindustrialisation, and who are not reaping the benefits of the current wave of redevelopment. This latter claim, primarily supported by anecdotal evidence collected by the authors in the context of contacts with community organisations, still needs to be validated and clarified through further, empirical, research. The goals of this research were to explore the up-stream theoretical implications of the current conceptual framework and its lack of attention to heritage considerations, and the downstream consequences of this framework as illustrated by redevelopment projects in Montréal. This exploration is aimed at proposing a way to broaden perceptions of the opportunities and challenges of brownfield redevelopment, through the incorporation of knowledge produced by a morphological reading of such post-industrial sites.

Such a reading has already allowed us to gain deeper understanding of the historical stratification of spaces of industrial production and in particular of the historical interplay between residential and industrial forms. It revealed the existence of a *genius loci* largely attributable to pre-existing sets of opportunities and constraints that shaped the local enactment of global industrialisation processes. In revealing the operative potential of the traces and patterns marking brownfield sites, urban morphology strikes us as an innovative means to address lacunae in current practices and curtail in particular their deleterious effects on the built heritage of urban industrial neighbourhoods. The broader implications of this proposed approach need to be further developed, but we claim that it could serve as a cornerstone in a strategy to foster the collective reclamation of former spaces of production so that local populations can benefit from these significant investments and continue to live in an environment that holds meaning in terms of their material culture.

Notes

1. Ironically, such a clean-slate approach to urban redevelopment has been severely criticized in the past, when the random destruction of inherited ordinary residential landscapes in the name of ‘progress’ became an intolerable procedure for urban preservationists and local populations alike. See for instance Helman’s (1987) depiction of the epic debate over the destruction of the Milton Park district in Montréal.

2. We share Hodder and Hutson’s active conception of material culture, seeing society and material culture as mutually constitutive (2003).

3. DeSousa highlights the restoration or enhancement of central cities’ tax base, increased utilisation and efficiency of existing hard (infrastructure) and soft services, and enhancing the economic, social, and symbolic appeal of ‘blighted’ neighbourhoods (De Sousa, 2003, 195-196)

4. See for instance Towards an Urban Renaissance: The Urban Task Force, (Urban Task Force, 1999) a report commissioned by the central government with the
mandate to “identify causes of urban decline and establish a vision for our [British] cities, founded on the principles of design excellence, social wellbeing and environmental responsibility” (Rogers, 2005, 2).

References


United States Environmental Protection Agency.
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